A FRAMEWORK FOR SOCIAL AND ECONOMIC SUSTAINABILITY BENEFITS EVALUATION OF SUSTAINABLE REGENERATION PROJECTS IN THE UK

Julius Kofi Akotia

Ph.D. Thesis **2014**

A FRAMEWORK FOR SOCIAL AND ECONOMIC SUSTINABILITY BENEFITS EVALUATION OF SUSTAINABLE REGENERATION PROJECTS IN THE UK

Julius Kofi Akotia

School of the Built Environment, College of Science and Technology, University of Salford, Salford, UK

Submitted in Partial Fulfilment of the Requirements of the Degree of Doctor of Philosophy, August 2014

Table of Contents

LIST OF TABLES

LIST OF FIGURES

DECLARATION

This thesis is submitted under the University of Salford code of practice for the conduct of postgraduate research degree programmes. Some findings of this research have been published in refereed conference proceedings prior to the submission of this thesis. The work presented was carried out under the supervision of Professor Charles Egbu, of the School of the Built Environment, University of Salford.

I hereby declare that the work presented in this thesis is my own work and that there is no portion of the work covered in this thesis has been submitted anywhere for the award of any academic degree or qualification.

Signed: .....
Julius Kofi Akotia

Date: .....

ACKNOWLEDGEMENTS

I will like to express my profound gratitude to my supervisor, Professor Charles Egbu, who was always ready to welcome me into his office, most often without his prior notice, for his guidance, advice and support throughout this PhD journey. I wish to emphasise that his guidance, advice, and support have contributed to the successful completion of this research.

My special thanks also go to Professor Christopher Fortune who began the supervision process of this research for the guidance and direction he has provided, most especially at the early stages of this research. I will also like to express my gratitude to all the members of staff at the research office of the School of the Built Environment, University of Salford, for their support.

I wish also to extend my special thanks to my wife, Esther Cobblah Gomado, my dad, Nicholas Akotia, my mum, Helen Alorka and my entire family and friends for their invaluable support and prayers.

Above all, I am very much grateful to God Almighty for his goodness and mercy he abounded to me from the beginning to the end of this PhD. Without God, it would have been impossible for me to successfully complete this PhD.

ABSTRACT

In recent years, the concept of sustainable regeneration has been recognised as being a major social and economic concern which has been a focal point of government policy for some time in the UK. The appreciation of such concerns has led to the development of various evaluation frameworks to guide practitioners to deliver higher and improved sustainability standards for their sustainable regeneration projects. Although these evaluation frameworks have been applied on sustainability projects in general, their focuses have remained limited to the evaluation of the environmental benefits, seemingly, relegating the social and economic benefits to the background. It has been argued that achieving successful delivery of socio-economic regeneration has proved to be elusive and difficult to deliver due to lack of understanding and over concentration on the environmental aspect of sustainability. While there have been some studies on sustainability evaluation of regeneration projects in general in the UK, it is contended that, there remain a paucity of a well-defined empirical research that is able to deal with the issues relating to the evaluation of the socio-economic sustainability benefits of sustainable regeneration projects. Hence the study aims to develop a framework that can be used to evaluate the social and economic sustainability benefits of sustainable regeneration projects.

The study adopts a mixed method approach: qualitative and quantitative research methodologies to explore the research questions to meet the aim and objectives set out for the study. A qualitative data is collected through semi-structured interviews from 21 practitioners from three selected construction organisations involved in the delivery of sustainable regeneration projects in the UK. This is complemented by a quantitative data collected through a questionnaire survey from 193 practitioners involved in the delivery of sustainable regeneration projects in the UK.

The study identifies a number of barriers and drivers that determine the adoption and implementation of the social and economic sustainability factors in the delivery of successful sustainable regeneration projects in the UK. Notable among the barriers identified include, lack of funding/financial support, the contracts' requirements and lack of clients' willingness to adopt sustainability. Similarly, enhancement of reputation, competitive advantage and clients' requirements are some of the drivers identified to be determining the adoption and implementation of the social and economic sustainability factors in the delivery of the regeneration projects. The findings also reveal that health and safety, education and skill

training opportunities and affordable housing are the most considered social sustainability factors being promoted by practitioners on their regeneration projects. The economic sustainability factors which are currently being promoted by practitioners include, value for money, profitability for investors/developer (Return on investment) and jobs and employment opportunities.

It is observed that a significant number of practitioners are still not genuinely committed to adopt and implement the socio-economic sustainability principles on their regeneration projects. The study also identifies the lack of understanding and knowledge of the sustainability composition of sustainable regeneration projects. An evaluation framework is developed to guide practitioners to evaluate the social and economic sustainability benefits of their sustainable regeneration projects. It recommends for guidelines or checklist of the key sustainability composition of sustainable regeneration projects to guide practitioners.

CHAPTER 1

1.1 Background to the Study

The awareness and significance of sustainable regeneration has been a growing concern around the world for the last few decades. Roberts (2000: 17) defines regeneration in his practical guide handbook as a *"comprehensive and integrated vision and action which leads to the resolution of urban problems and which seeks to bring about a lasting improvement in the economic, physical, social and environmental condition of an area that has been subject to change".* The objective of the sustainable regeneration concept according to CLG, (2009); Glossop, (2008) and SDC, (2003), is to transform society by creating sustainable places where people want to live, work and feel secure. It also means meeting the sustainable development needs of the people in a way which delivers social progress, economic growth, environment protection, and a better quality of life (OGC, 2007; SDC, 2003).

In recent years, the concept of sustainable regeneration has been recognised as being a major social and economic concern which has been a focal point of government policy for some time in the UK. The government has initiated a number of sustainability policies and evaluation methods in an attempt to deal with some of the challenges associated with the delivery of the sustainability outcomes of regeneration projects (Haran *et al.*, 2011). The appreciation of such concerns has led to the development of various evaluation frameworks to guide practitioners to deliver higher and improved sustainability standards for their sustainable regeneration projects. In more recent times, there have been a number of research works which sought to study and analyse how the UK built environment was responding to the challenges of integrating sustainability into regeneration projects (Dixon, 2006). The Sustainable Development Commission (SDC, 2003), for example, suggested that the development and delivery of regeneration projects has proved to be a testing and on-going challenge for government agencies, construction industry practitioners and communities in which regeneration projects have been sited. In their seminal work, Jones *et al*., (2003) argued that achieving successful sustainable regeneration has proved to be elusive and difficult to deliver due to lack of understanding and over generalisation of sustainability factors. Winston (2009) for instance, identified many such problems associated with the successful delivery of sustainable regeneration initiatives to be of a social and economic nature rather than the environmental aspects of the projects. The Audit Commission Report (2007) has revealed that many sustainable regeneration projects are yet to have a consistent

and positive impact on the most deprived localities in which the projects have been implemented. For example, the report indicated that the level of long-term unemployment in such 'so called regenerated' communities has remained static and targeted work to develop skills and access to sustainable jobs and employment for these communities has remained under developed.

According to Brandon and Lombardi (2011), previous works undertaken on sustainable regeneration have shown that they lack a conceptual clarity related to the evaluation of sustainability outcomes of the projects. They argued that most of the existing evaluation methods designed for regeneration projects were based on environmental indicators that were derived from ideas and assumptions of individual practitioners. Numerous attempts aimed at delivering sustainable regeneration have primarily been limited to the environmental performance of the projects (Reyes *et al.,* 2014). Although a number of evaluation systems have been developed over the period, their focus and considerations have largely remained limited to evaluating the environmental impacts of the projects. Many of the earlier regeneration initiatives that were meant to address socio-economic disparities have focused on improving the environmental aspects of regeneration. This has resulted in many sustainable regeneration projects' inability to deliver their required sustainability objectives.

However, it has been suggested that improving the socio-economic sustainability aspects of regeneration projects can potentially enable sustainable regeneration projects to deliver better sustainability outcomes to address the socio-economic disparities that were entrenched in the communities (Haran *et al.*, 2011; Adamson, 2010; CLG, 2008; SDC, 2003). In this regard, Smith (2006) argued that sustainable regeneration projects should not only focus on addressing environmental aspects, but should also consider the broader issues of social and economic sustainability factors of the projects as well. Similarly it is also suggested that sustainable regeneration projects can reinforce a sense of community confidence, make an important contribution to the local economy and act as a catalyst for improving the wider area (Office of Deputy Prime Minister (ODPM), 2005), if the social and economic sustainability deliverables are well incorporated and delivered as an outcome of the projects. However, this will require innovative practices and evaluation systems that are capable of embracing other dimensions beyond the current consideration of sustainability, and not the one that just focuses only on environmental dimension (Dixon, 2006; SDC, 2003). In this regard built

environment practitioners also have a key role to play in ensuring that sustainable regeneration projects deliver their required socio-economic sustainability benefits.

The built environment and its practitioners influence social welfare and human well-being, urban activities, the economy and the general environment in numerous ways. The linkages between the built environment and sustainable development show greater potential for the implementation of sustainable regeneration initiatives with a wider and stronger emphasis on the social and economic benefits and a better quality of life for all. According to Sev (2009), the relationship between sustainable development/regeneration and the built environment has become evident, since construction is of high socio-economic significance. The pursuit of sustainable regeneration projects requires a fundamental change of perspective to the evaluation practices and delivery of social and economic sustainability outcomes of regeneration projects. Sustainability evaluation has a key role to play in introducing socio-economic sustainability ethos and principles into the mainstream of regeneration projects. Accordingly, the application of evaluation mechanisms requires a level of consideration beyond the current focus on environmental performance to include social and economic considerations of sustainable regeneration projects. Such evaluation practices must be carried out in a way that is comprehensive, practical and acceptable to a range of sustainable regeneration projects and stakeholders with differing interests and priorities to achieve the required sustainability benefits of the projects. It is also acknowledged that evaluation practice provides an effective management mechanism on which decision-makers can base their decisions and judgements (Kazmierczak *et al*., 2009). It is further argued that adopting good evaluation practices form crucial aspects of decision-making in the pursuit of achieving sustainable development and regeneration objectives (United Nations, 2001).

From the above discussion, it is evident that the current project management systems, the policies and governance systems and the nature of the evaluation frameworks all have an impact on the current construction industry practices' related to the delivery of sustainable regeneration projects in the UK. Therefore the quest to deliver socio-economic sustainability benefits brings to the fore the exploration of new ways of delivering sustainable regeneration projects.

1.2 Problem Statement

The UK has been one of the first developed nations to produce a national strategy on the sustainable development and regeneration concept (Department for Environment, Food and Rural Affairs (DEFRA), 2011; Dixon, 2006; Department of Trade and Industry (DTI), 2004). The UK government took the lead to implement most of the sustainable development and regeneration principles and many of the Agenda 21 action plan, both in theoretical and practical terms (DEFRA, 2011). However, there is evidence to suggest that the delivery of sustainability projects, such as regeneration projects, is still faced with numerous problems, and in most cases, unsustainable (Winston, 2009). Many concerns have been raised about the real composition (theoretical and practical) of sustainability projects (Zheng *et al*., 2014; Carter and Fortune, 2007). Some schools of thought have sought to question whether in fact, much of what has been termed as sustainable regeneration should rather be labelled as renewal or redevelopment, due to the limited consideration given to the projects' related socio-economic sustainability factors (Carpenter, 2011). The emphasis of sustainability evaluation along purely environmental lines is a common theme and is readily seen within the sustainable regeneration literature (Reyes *et al*., 2014; Carter and Fortune, 2007). According to Varsei *et al*., (2014) and Edum-Fotwe and Price (2009), the delivery of social and economic sustainability factors of sustainability projects presents the aspects of sustainable development/regeneration that are most difficult to achieve. The flexibility and lack of conceptual clarity of the composition of sustainability have enabled practitioners to emphasise the sustainability dimension that fits within their own agenda (Brandon and Lombardi 2011; Evans and Jones, 2008), resulting in other equally important dimensions such as economic and social concerns being pushed into the background. Smith (2006) is of the view that regeneration programmes should not only address environmental features, but also consider the broader issues of social and economic features. It is argued that any regeneration project that fails to evaluate each of the well-established sustainability pillars is not likely to achieve its sustainable development and regeneration objectives (Winston 2009; CLG, 2008).

There is an emerging recognition that improving the socio-economic structures in a community is more likely to deliver sustainability outcomes of regeneration projects (Adamson, 2010; SDC, 2003). The built environment influences social welfare and human well-being, urban activities, the economy and the general environment in numerous ways. According to Sev (2009), the correlation between sustainable development and regeneration and the built environment has become evident, since construction is of high socio-economic

significance. Sustainability evaluation has a key role to play in introducing sustainability ethos and principles into the mainstream delivery of regeneration projects. It is widely argued that the sustainability considerations for regeneration projects are inherently multifaceted as a result there are several issues that need to be addressed to develop an appropriate evaluation system that enable the projects to achieve their sustainability objectives (Ugwu and Haupt, 2007). The performance of the sustainability evaluation frameworks currently in practice has been well acknowledged by several authors (Carter and Fortune, 2007). Clapham (2014) and Carter and Fortune (2007) for instance, have identified gaps between sustainability frameworks in practice, and the lack of common structured frameworks to assist practitioners involved in the delivery of sustainable development and regeneration projects. While there have been some evaluation frameworks and methodologies that have been developed and applied to evaluate the impacts of sustainable regeneration projects over the decades in the UK, their focuses have remained limited to evaluating the environmental impacts of the projects (Reyes *et al*., 2014; Carter and Fortune, 2007; Hurley and Horne, 2006). The main evaluation objectives underlying many of these 'so called' evaluation frameworks have traditionally been limited to design cost and environmental factors (Carter and Fortune, 2007), making their validity and reliability to evaluate the socio-economic sustainability factors of regeneration projects questionable. It has also been argued that many evaluation frameworks for sustainability projects sacrifice social and economic factors at the expense of the environmental factors (Carter and Fortune, 2007). However, it is contended that applying an evaluation framework that is capable of evaluating the social and economic sustainability issues holistically is fundamental towards the delivery of more desirable socio-economic sustainability outcomes of sustainable regeneration projects. Yet the absence of comprehensive and well-structured frameworks makes the delivery of such socio-economic sustainability benefits progressively more problematic and doubtful.

The main rationale behind any sustainable regeneration initiative is to achieve its social and economic sustainability objectives (CLG, 2008, HM, Treasury, 2007; Hemphill *et al*, 2004). Despite the interest and emergence of several sustainability initiatives and government policy systems as well as numerous frameworks and indicators that have been developed over the period in the UK, regeneration projects are yet to make serious impacts in tackling the social and economic sustainability decay within the communities where these projects have been implemented (Lombardi *et al*., 2011; Audit Commission Report 2007). Many communities with regeneration projects have continued to suffer from exclusion, high levels of poverty,

high crime rates, poor education and health and a lower quality of life due to lack of employment and other socio-economic sustainability related issues (Granger, 2010). Similarly, the focus on the environmental aspects of regeneration and renewal programmes does very little to address the underlying and the fundamental issues of social and economic disparities that are widespread in many of the deprived communities (Carpenter, 2011). According to Smith (2006), the traditional methods of project management related to the delivery of sustainable regeneration projects and the current evaluation systems in place are themselves inadequate to deliver and promote the required benefits of sustainable development/regeneration. Kazmierczak *et al*., (2009) indicated that most of the evaluation systems and processes of regeneration have largely been limited to post project evaluation. They argued that the absence of effective evaluation mechanisms and appropriate frameworks were responsible for most regeneration projects' inability to deliver their desired sustainability objectives.

A recent work done by Clapham (2014), further acknowledged this point by indicating that attempts to evaluate the impact of sustainable regeneration have been complicated by the absence of clearly specified sustainability objectives and outcomes. Although there have been some evaluation frameworks developed to evaluate regeneration programmes, yet each one of these frameworks has been deficient in an attempt to measure the social and economic sustainability impacts of the programmes (Clapham, 2014). He went on to indicate that, despite the numerous strategies that have been undertaken by government and other regeneration practitioners to enable regeneration initiatives to deliver the required socio-economic benefits to alleviate poverty for society, to-date there has not been any well-established evidence pointing to the achievement and delivery of such sustainable regeneration objectives (Clapham, 2014). Similarly, inadequate level of stakeholders, in particular the key practitioners' involvement in the delivery of sustainable regeneration projects has also been cited as one of the reasons for most regeneration projects' inability to deliver their required sustainable objectives (Yang *et al*., 2009; Rowlinson, *et al*., 2008). It has been reported that many sustainability projects have typically been delivered with the difficulty of engaging the key practitioners in the process (Rowlinson, *et al*., 2008). However, it is contended that the socio-economic sustainability outcomes would be well delivered when the key practitioners are actively involved and well represented in the delivery of the projects.

Hence, the pursuit of sustainable regeneration requires a fundamental change of perspective to the evaluation frameworks and practices currently in use. Accordingly, an effective evaluation system requires a level of consideration beyond the current focus on environmental performance to include the socio-economic considerations of regeneration projects. Brandon and Lombardi, (2011) pointed out that the current thinking needs to be considered alongside an improvement or replacement of the conventional methods with those that better address sustainability concerns holistically to enhance their evaluation capacities. It is suggested that "a fundamental rethink is required around the way sustainability is approached during the management of construction projects" to ensure that projects deliver their sustainability objectives (Thomson and El-Haram, 2014:109). In this regard, Clapham (2014) and Lee (2006) advocated a paradigm shift toward evaluation systems and practices that constitute a holistic approach to the evaluation of sustainability instead of the mechanistic approach currently being adopted. The bottom-line is, for sustainable regeneration projects to deliver their sustainability outcomes, things have to be done differently.

According to Brandon and Lombardi (2011), several research works undertaken on sustainable regeneration showed that they remained fragmented and also lack a conceptual clarity related to the delivery of sustainability of the projects. They identified sustainable regeneration as an evolving domain and suggested the need for further study as there has not been a well-defined research or evaluation framework that has been able to deal with the issues of socio-economic sustainability benefits evaluation in a comprehensive and a decisive manner. Consequently, in view of this, it is apparent that for sustainable regeneration projects to fully deliver their required socio-economic sustainability benefits, there is a need for exploration of new ways of evaluating sustainable regeneration projects in the UK.

1.3 Research Questions

The research therefore seeks to address the following key questions:

- What are the main organisational issues that drive regeneration practitioners to adopt and implement the social and economic sustainability factors in their sustainable regeneration projects in the UK? (RQ1)

- What consideration is currently given to promoting the social and economic sustainability factors on sustainable regeneration projects in the UK? (RQ2)

- What are the main organisational barriers that impede practitioners to adopt and implement the social and economic sustainability factors in their sustainable regeneration projects in the UK? (RQ3)

- What are the UK government's main social and economic regeneration policies that are influencing practitioners' policies and practices to promote socio-economic sustainability factors on their sustainable regeneration projects? (RQ4)

- How are the social and economic sustainability factors of sustainable regeneration projects being currently evaluated by practitioners in the UK? (RQ5)

1.4 Aim

The aim of the research is to develop a framework which can be used to evaluate the social and economic sustainability benefits of sustainable regeneration projects in the UK.

1.5 Objectives

The research has the following objectives:

- To examine the literature on sustainable regeneration projects and sustainable development and public policy frameworks on sustainable development and regeneration in the UK.

- To examine the extent to which practitioners have been involved in the delivery of sustainable regeneration projects in the UK.

- To explore the organisational socio-economic sustainability factors that drive practitioners to adopt and implement socio-economic sustainability factors on their sustainable regeneration projects in the UK.

- To explore the extent to which consideration is given to the promotion of social and economic sustainability factors on sustainable regeneration projects in the UK.

- To explore the organisational socio-economic sustainability barriers that impede the adoption and implementation of socio-economic sustainability factors in regeneration projects in the UK.

- To explore the UK government's social and economic regeneration policy drivers that influence practitioners to adopt and implement social and economic sustainability factors in the sustainable regeneration projects

- To explore the current evaluation practices and processes adopted to evaluate the social and economic sustainability factors on sustainable regeneration projects in the UK.

- To develop and validate a framework for the evaluation of the social and economic sustainability benefits of sustainable regeneration projects in the UK.

1.6 Research Contribution to Knowledge

The rationale for improving the current delivery of sustainable regeneration projects is to ensure that they deliver their required socio-economic sustainability benefits for society. It can readily be seen in the literature that there is a significant body of knowledge and publications on sustainable regeneration and socio-economic sustainability policies and practices. However, most of this available information is fragmented and presented in a form that is not convenient for practitioners to understand and implement. Furthermore, while there have been numerous research works and evaluation frameworks on the subjects of regeneration and sustainability indicators in general, none of these research works and evaluation frameworks have sought to address the specific issues relating to social and economic sustainability benefits evaluation of regeneration projects. As such, no detailed and comprehensive case studies have been carried out on sustainable regeneration projects in attempt to explore and evaluate how socio-economic benefits can be delivered from the projects. Therefore, undertaking this research will fill the gaps identified in the literature and also benefit practitioners and other stakeholders in the following areas:

- This research will generally broaden practitioners and other stakeholders' knowledge and understanding of the evaluation and delivery of social and economic sustainability benefits of sustainable regeneration projects.

- The evaluation framework developed will serve as a guide for sustainable regeneration practitioners and policy makers responsible for the evaluation and delivery of regeneration projects. The evaluation framework developed will help practitioners in their quest to adopt and implement the social and economic sustainability factors that enable the successful delivery of sustainable regeneration projects.

- It will also serve as a basis and reference document for future research. The achievement of the aim will also contribute to the further refinement of the academic treatment of evaluation and delivery of socio-economic sustainability benefits of regeneration projects. It will also enable formal courses of built environment education to better reflect the emergent area of practice related to evaluation and delivery of socio-economic sustainability benefits of sustainable regeneration projects.

The research process followed for this present study is illustrated in Figure 1.1 below.

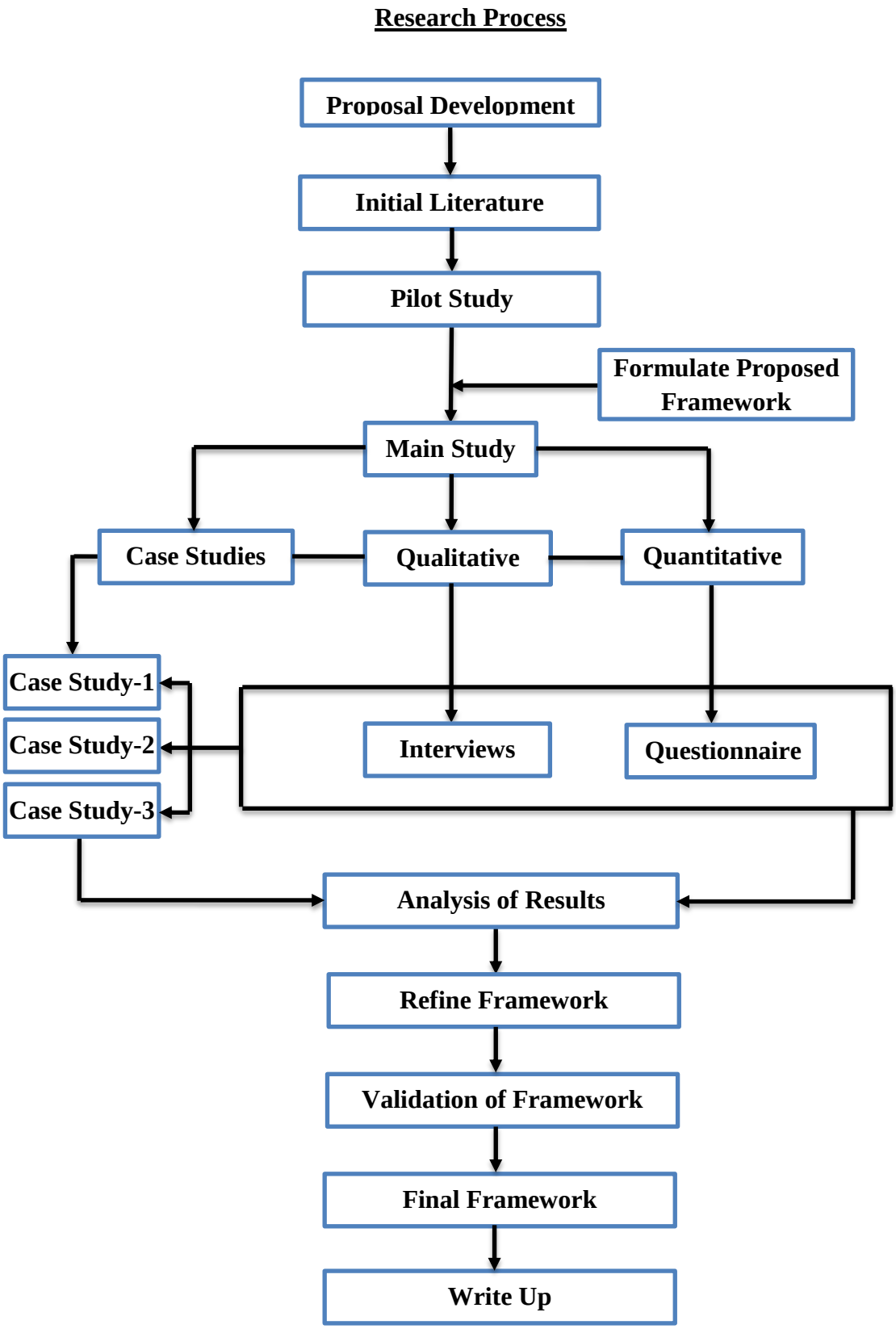

Figure 1.1: Research process

1.7 Structure of the Thesis

This thesis is divided into ten Chapters. This includes the introduction Chapter as presented below.

Chapter 1: This Chapter provides the introduction and background of the research. It discusses the research problem, the research questions, the aim and objectives and the contribution to knowledge. The Chapter also provides the scope and outline of the research process adopted for the study.

Chapter 2: This Chapter reviews the literature on the sustainable development concept in relation to the activities of the construction industry and the built environment in general. It looks at the sustainable regeneration concept and how it evolved and its linkages with the sustainable development objectives. It also reviews the literature on the social and economic sustainability factors of sustainable regeneration projects, as well as the evaluation processes. The UK government's main socio-economic sustainability policy drivers and other socio-economic sustainability drivers and barriers are also considered in this Chapter.

Chapter 3: This Chapter presents and justifies the research design and methodology and the philosophical stance adopted for the study. It discusses the various research methods, data collection and method of analysis adopted for the study.

Chapter 4: This Chapter presents the analysis and discussion on the practitioners' level of involvement in the delivery of sustainable regeneration projects in the UK. It also presents the discussion and analysis on their level of involvement in the three main types of sustainable regeneration projects and draws a conclusion and recommendations from the findings.

Chapter 5: This Chapter presents the analysis and discussion on organisational social and economic sustainability drivers identified to be driving practitioners to adopt and implement social and economic sustainability principles in their regeneration projects in the UK.

Chapter 6: This Chapter presents the analysis and discussion on social and economic sustainability factors which are currently being promoted on sustainable regeneration projects in the UK.

Chapter 7: This Chapter presents the analysis and discussion on the main organisational barriers identified to be impeding practitioners to adopt and implement social and economic sustainability factors in their sustainable regeneration projects in the UK.

Chapter 8: This Chapter presents the analysis and discussion of the UK government's socio-economic sustainability policy drivers for sustainable regeneration projects. A conclusion and recommendations are also presented in this Chapter.

Chapter 9: This Chapter presents the analysis and discussion on the evaluation process. The Chapter also provides the discussion on the components of the framework and processes followed to develop the initial and final conceptual framework for the study.

Chapter 10: This final Chapter presents the overall conclusions of the study. It also makes recommendations for possible improvements of future works in the areas of practice, policy and studies.

1.8 Summary

The Chapter presented the background of the study. It specifically presented the initial literature review, highlighting the gaps and the need for the study. The research questions, aim and objectives, the problem statement and contribution to knowledge were also presented in the Chapter. Finally, the Chapter presented the research process and the structure of the thesis, adopted by this present study. The next Chapter presents a review of the literature on areas of sustainable development and regeneration projects and other areas relating to the delivery of sustainable regeneration projects in the UK.

CHAPTER 2 CHAPTER TWO - LITERATURE REVIEW

2.1 Introduction

This Chapter presents the literature review on sustainable development, sustainable regeneration, and evaluation processes as outlined in Figure 2.1 below. It starts by reviewing literature on the sustainable development concept in relation to the activities of the construction industry and the built environment in general. It also looks at how the construction industry has articulated and applied the sustainability concept to deliver construction projects, and highlights the importance of sustainability, particularly to the construction industry in the UK. It then goes on to review the literature on the sustainable regeneration concept and how it evolved, as well its linkages with the sustainable development objectives. The main drivers and barriers that influence construction industry organisations to adopt and implement sustainability, and in particular social and economic ones on their projects, are also looked at. Additionally, it reviews the literature on various types of sustainable regeneration projects. The final part of this Chapter reviews the literature on the evaluation processes and finally a summary of the Chapter is presented.

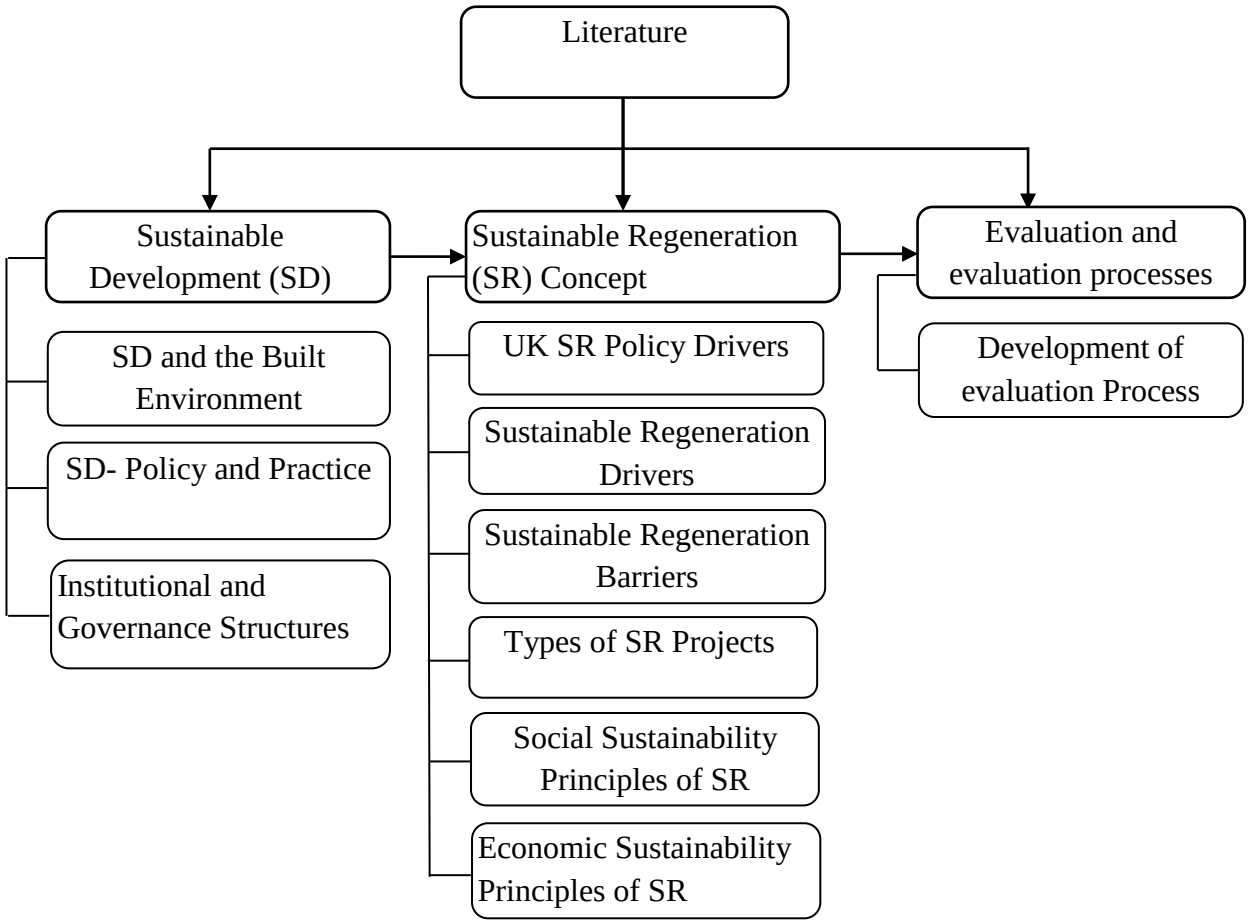

Figure 2.1: Outline of literature review

2.2 The Conception of Sustainable Development

Sustainable development has emerged as a new paradigm and a guiding principle for development activities around the world (Jaillon and Poon, 2008; United Nations, 2011). The United Nations has been a driving force behind the sustainable development agenda (Edum-Fotwe and Price, 2009). According to Edum-Fotwe and Price (2009), the current motivation of sustainable development can be traced back to the initiative put forward by the Brundtland Commission which became the benchmark for thinking about sustainable development through a wide range of policy actions. The World Commission on Environment and Development (WCED), also known as the Brundtland Commission (1987) "Our Common Future", defined sustainable development as: *"development that meets the needs of the present generations without compromising the ability of future generations to meet their own needs"* (WCED, 1987).

The Brundtland Commission's definition formed the basis and guiding principle for socio-economic and environmental issues and policies which sought to take proactive actions and decisions to address the current situation and deal more efficiently with development problems for the future generations (Carter and Fortune, 2007; Golden, 2004). It presented a significant milestone for most developments that set out a new agenda and framework for socio-economic activities (Edum-Fotwe and Price, 2009). The Commission laid the foundation for the Rio Declaration adopted at the United Nations Conference on Environment and Development (UNCED, 1992), which took the concept of sustainable development further by formulating the Agenda 21 'Policy plan for environment and sustainable development in the 21st Century' and set out 27 fundamental principles and programmes of action for achieving sustainable development (Brandon and Lombardi, 2011; Pitt *et al.*, 2009). It sought to harmonise not only the socio-economic and environmental parameters, but also set out mechanisms for expressing our collective responsibility towards future generations (Thomson, *et al.*, 2009). A major achievement of the Rio conference was the development of Agenda 21, which recommended a new way of investing in the future and also extended the debate beyond the environmental issues (Ang and Wilkinson, 2008; Du Plessis, 2005). The Rio Declaration and policy framework had a great impact in creating increased awareness and getting the world to recognise the importance of human activity on the environment. It reinforced the integration of the three pillars of sustainable development such as; the economic development, social equity and environmental protection as interdependent and mutually reinforcing pillars (Brandon and Lombardi, 2011; Carter and Rogers, 2008; Civil

Engineering Contractor Association (CECA), 2007; Office of Government Commerce (OGC), 2007).

In the face of growing demands for a better quality of life, the Rio conference renewed the understanding of the relationship between environmental problems, economic conditions and social justice issues (Brandon and Lombardi, 2011), and set out national strategies and renewed the political commitment to achieve sustainable development objectives (United Nations, 2011). The decision to adopt sustainable development as a key aspect of United Nations activities for achieving internationally agreed goals, including those contained in the United Nations Millennium Declaration, gave overall political direction to the implementation of Agenda 21 (United Nations, 2010). The Brundtland Conference (1987), and the subsequent United Nations, Agenda 21 initiative all indicated the need for sustainable development to consider environmental protection, and economic and social well-being with equal attention (Carter and Fortune, 2007). The World Summit on Sustainable Development held in Johannesburg built on the existing commitments of the Rio conference and other international summits, including the multilateral environmental agreements (Du Plessis, 2005). Since the Rio conference, global attention has focused on the need to consider the sustainable development at local community levels (Brandon and Lombardi, 2011). The Johannesburg Summit had reignited enthusiasm and called for a strong and vibrant commission on sustainable development to play a pivotal role in accelerating action at all levels in the implementation of Agenda 21. The Johannesburg Plan of Implementation adopted at the World Summit on Sustainable Development (WSSD, 2002) identified the provision of good infrastructure as the key factor and driving force for the achievement of both the Millennium Development Goals and the Johannesburg Plan of Implementation (Du Plessis, 2005). The deliberations at the summit also highlighted the significant progress made towards achieving international consensus and the implementation of the vision of the sustainable development agenda (United Nations, 2011; Brandon and Lombardi, 2011). It called for the adoption of national strategies, and set out a global social contract based on an equitable and integrated vision of progress as well as awareness about the need for sustainable development. The goal of such strategies should be to ensure socially responsible economic development, while protecting the environment and the natural resource base for future generations (United Nations, 2010).

According to Atkinson (2008), the early debate on sustainable development has mainly centred on environmental protection. It has widely been argued that the concept of sustainable development has evolved from environmental consideration through economic and social considerations (Maliene *et al.*, 2008). Hawkins and Shaw (2004) pointed out that the ultimate goal of sustainable development is to ensure convergence among the three pillars of sustainability often referred to as the triple bottom line, as illustrated in Figure 2.2. These dimensions, according to Hawkins and Shaw (2004), are concerned with a better quality of life for present and future generations which must be given equal weighting. Primarily, the objective of sustainable development is to promote and ensure a steady progress towards a future of universally shared human socio-economic well-being and prosperity (Brandon and Lombardi 2011). The concept is based on the knowledge that there is an ultimate limit to the availability of natural resources (Brandon and Lombardi 2011). These concerns have attracted the world leaders' attention to begin to promote better ways of undertaking developmental activities to ensure sustainable growth for current and future generations (Bennett and Crudgington, 2003). The challenge of finding a better means in which human activities can be made sustainable in the long term has raised a wide range of issues; consequently, a sustainable built environment and the construction processes have been recognised as a major cause of environmental disruption as the industry strives to improve living conditions by creating and adopting production technologies that consume natural resources and cause pollution (OGC, 2007).

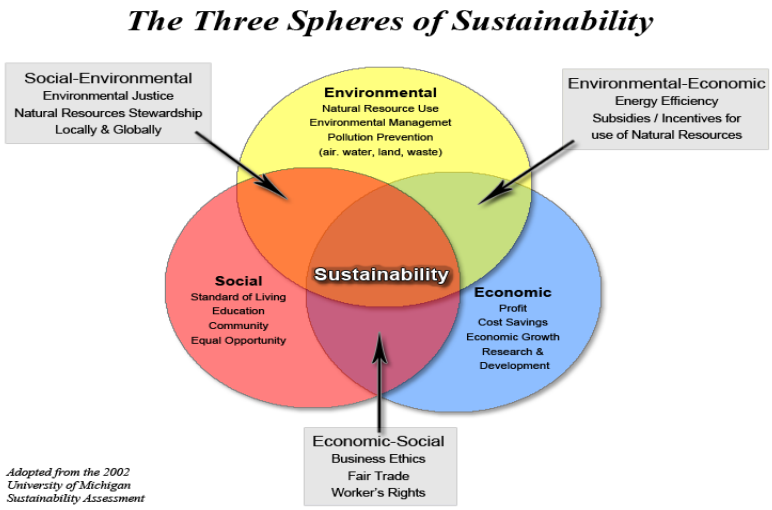

Figure 2.2: The triple bottom line of sustainability (Rodriguez, *et al.*, 2002)

2.3 Sustainable Development and the Built Environment

Van Bueren and De Jong (2007) described sustainable development as a bridge that brings together different ranges of values and objectives, nations, and stakeholder groups as well as the present and future generations. The built environment represents the physical structure and the vehicle for sustainable development (Brandon and Lombardi, 2011). Generally, the performance of the built environment is expressed by the quality of life society benefits from, since many sectors of human development contribute to the creation of factors that define the built environment (Brandon and Lombardi, 2011; OGC, 2007). The built environment provides various aspects of government policy aimed at providing and modernising infrastructure such as housing, schools, hospitals, transport etc., (Van Bueren and De Jong, 2007). The built environment plays a vital part in the development of infrastructure and commerce (Brandon and Lombardi, 2011).

The built environment, while very essential and indispensable for human development and survival, is also partly responsible for the current sustainable development problems (Brandon and Lombardi, 2011). Its activities contribute significantly to the current unsustainable path of urban and community development (Brandon and Lombardi, 2011). The conventional sustainable development practices of the built environment have brought about an increasing distraction to the natural environment, physical systems and social and economic fabrics on which our collective wellbeing depends (SDC, 2003). According to Pitt *et al.*, (2009), any efforts to improve the physical system of the built environment will invariably have an impact on society and the ecosystems. Sustainable development of the built environment requires more than the consideration of environmental issues, therefore, any attempt to enhance environmental features within the built environment has to take into account social and economic issues (Brandon and Lombardi, 2011). The requirement to deliver sustainable projects presents challenges to built environment professionals; therefore, they must recognise the importance of sustainable development as an integral aspect of built environment practices and not as a by–product or an add-on activity (Bennett and Crudgington, 2003). Hence, the need to ensure a balance between the sustainability indicators as mutually reinforcing pillars of the sustainable development agenda (Brandon and Lombardi, 2011). Activity within the built environment directly influences the sustainability of ecosystems and human structures (Pitt *et al.*, 2009). Therefore, the quest towards sustainable development puts the spotlight on the built environment and the construction industry as a whole, and anyone associated with creating the built environment has a key role to play in delivering and ensuring the

sustainability of our communities (Pitt *et al.,* 2009). A responsible sustainable built environment should be seen as a major driver and a practical solution towards the achievement of sustainable development initiatives (Brandon and Lombardi, 2011). Similarly, the built environment must also be viewed as an agent of development within which serious attempts must be directed to implement the principles of sustainability parameters (Thomson *et al.,* 2009). The rate of growth and the prevailing pattern of development and urbanisation have serious negative implications for global sustainability (Cruickshank and Fenner, 2007). Urbanisation and the enhancement of sustainability of the built environment, according to Brandon and Lombardi (2011) signify an unprecedented human and ecological transformation. As a result, delivering a sustainable built environment will require innovative approaches and systems in ensuring that the principles underlying the sustainable development objectives are well embedded in the construction processes.

2.4 Sustainable Construction

The construction industry contributes significantly to the economies of many nations. In the UK, it accounts for about 7% of its Gross Domestic Product (GDP), employing about 3 million people (Department for Business Innovation and Skills (DBIS), 2013; Department for Business, Enterprise and Regulatory Reform (BERR), 2008; Department of Trade and Industry (DTI), 2006). Its output plays a major impact on the environment and contributes to the prosperity of the economy (Xundi *et al.,* 2010; DBIS, 2008). It is seen as "an enabling sector which has a massive impact on the performance of the wider economy" (DBIS, 2013).
The construction industry plays a central role in promoting the sustainable development and growth agenda (Majdalani *et al.,* 2006). The construction industry can be said to have gone through various levels of implementing factors relating to sustainability performance over the years (Jaillon and Poon, 2008). In recent times there has been an increasing demand for the construction industry to take a more responsible and proactive approach towards the sustainable construction agenda (Ding, 2005). The principle of sustainable construction has been a growing concept and a core issue over the last few decades within the UK (Reyes *et al.,* 2014; DBIS, 2013; Edum-Fotwe and Price, 2009; DTI, 2006; SDC, 2003). According to Khalfan (2006), the industry remains virtually the most vital sector for adopting the principle of sustainable development due to its interrelated nature and activity.

The promotion and improvement of sustainability performance has become a pressing issue of the industry's practices in direct response to the sustainable development agenda (ODPM,

2008). Van Bueren and De Jong (2007) emphasised that the introduction of the sustainability concept had brought about new measures and challenges to the industry practitioners. The Department for Business Innovation and Skills (DBIS, 2013) and Civil Engineering Contractor Association (CECA, 2007) indicated that, improving the industry's sustainability performance can propel the industry towards achieving significant benefits in the long term. The sustainable construction principle has the potential to integrate the principles of sustainability into its practices, as an important feature for delivering better products and services (DBIS, 2013; Matar *et al.*, 2008). The requirement to deliver sustainable development presents a challenge to practitioners involved in the delivery of such construction programmes (DBIS, 2013; Thomson *et al.*, 2009; OGC, 2007; Cater and Fortune, 2007; DTI, 2006). The construction industry has a key role to play, since its core activities and processes rely heavily on natural resources and the environment (DBIS, 2013). Therefore, the delivery of sustainable construction requires the understanding and incorporation of sustainability principles into its mainstream practice (Van Bueren and De Jong, 2007; Majdalani *et al.*, 2006). It is argued that many of the challenges of sustainable construction will require integrated and interdisciplinary solutions (DBIS, 2013; SDC, 2003). Meeting these challenges will require the construction industry to re-evaluate how it carries out its operations in terms of the design, construction and management of its built facilities in a manner that offers the right environment in achieving sustainable development for present and future generations (Ugwu and Haupt, 2007; Khalfan, 2006).

According to Majdalani *et al.* (2006), the emergent concern about the impact of the construction industry on society and its ecosystems has come about as a result of the industry's inability to fully embrace and incorporate the principles of sustainability into its construction processes, from inception through to the construction phase of projects development. The different approaches adopted in delivering construction projects mean different approaches to integrating sustainability into the construction processes (Matar *et al.*, 2008; Lam *et al.*, 2011). Research conducted by the Department for Business Enterprise and Regulatory Reform (BERR, 2008) identified 37% of the respondents who suggested that the integration of sustainability principles into construction industry practices has the potential to address the issues of sustainable development beyond the environmental considerations. Matar *et al.*, (2008), maintained that while there have been on-going attempts to enhance sustainability within the practices of the industry, comprehensive approaches to integrating the features of sustainability factors have still been lacking. Construction activity according to

DBIS (2013) and Ding (2005) has both a direct and indirect impact on the natural environment and offers the opportunity to enhance the biosphere and deliver sustainable development. From a human view point, the ultimate objective of a construction project is to improve socio-economic wellbeing and the quality of life in general (Majdalani *et al.*, 2006). However, in terms of sustainable development, continuous construction activities and developments imply more damage to the ecosphere on which humanity depends (Presley and Meade, 2010). It is worth noting that the construction industry and the ecosystem are inherently connected together, and that the limitations of the industry invariably have an impact on the socio-economic prosperity of society.

In the UK for instance, the government has undertaken a number of initiatives in an attempt to integrate and improve the sustainability objectives within the construction industry to meet the sustainable development goals set out in Agenda 21 (DBIS 2013; SDC, 2008; DBIS, 2008; DTI, 2006; DEFRA, 2005). The recent international attention to the issues of sustainable development has placed demands on the construction industry to assess its operations to identify where it stands currently in terms of the Agenda 21 sustainability policy framework, and more importantly, to formulate strategies to achieve these objectives (Kaatz *et al.*, 2006). Sustainable development is considered as a means and opportunity by which the construction industry can contribute its quota to the larger global effort towards the achievement of the sustainable development objectives (Ding, 2005). However, to achieve the sustainable development goals envisaged by Agenda 21 and other international agreements, it is important that the construction industry responds swiftly to the challenges posed by sustainability requirements (Winston, 2009). Consequently, the linkages between the sustainability performance and sustainable construction show a greater potential for the implementation of sustainable development initiatives, with a wider and stronger emphasis on the social and economic sustainability aspects and a better quality of life for all (Du Plessis, 2005). Van Bueren and De Jong (2007) noted that the adoption of sustainability has resulted in difficulties in establishing clear borders, since the concept comprises many interrelated features. The growing population and urbanisation have made the construction industry a crucial sector for the sustainable development agenda; given that the construction industry provides the physical assets and the necessary infrastructure which are central to every facet of human development (DBIS 2013; Sahely *et al.*, 2005; Bennett and Crudgington, 2003). According to Tippett *et al.*, (2007), sustainable construction presents a fresh way of thinking which brings together the human drive to improve and achieve a better quality of life. As a

result, recognising sustainability objectives and integrating them within the core activities of construction processes have the potential to contribute to sustainable development. It is suggested that there are a number of ways in which the current construction practice can be transformed to make it less destructive to the environment, without compromising the efficiency and usefulness of the construction output (DEFRA, 2005). It is obvious that the industry will have to modify its activities in such a manner as to lessen considerably the consequential impacts on the natural environment. This calls for a better construction management processes to be carried out in a sustainable manner throughout the construction process (DBIS 2013). The construction industry needs to re-think its actions and the effects of its developmental activities if the industry is to make a meaningful contribution towards achieving the sustainable development agenda. Delivering sustainable construction objectives across the industry is essential and will require a cultural change if the industry is to achieve sustainable construction while remaining competitive.

Various issues contribute to the practice of sustainability principles for not being the overriding standard of practice within the construction industry (Matar *et al.,* 2008). Undoubtedly, construction activity has a significant and irreversible impact on the ecosystem, as it is the major consumer of both renewable and non-renewable natural resources (Ding, 2005). Ding (2005) went on to add that construction activities contribute immensely to the loss of land and natural vegetation, both by the creation and extension of human settlements as well as the raw materials used for construction activities. Hence, the industry must be seen to be putting the sustainable development objectives fully into practice (DBIS, 2008). In order to understand the changes that need to be made to develop an industry that is robust and sustainable, it is very important to look at the current practices that are being employed. Although there appears to be a wide range of opinions and positions on the issues of sustainability, there is a general consensus that the current construction practices are unsustainable (DBIS 2013; DEFRA, 2005), therefore the industry will have to redirect its developmental paradigm towards sustainability. According to Matar *et al.*, (2008), the importance of sustainable construction has been recognised, however, very few studies have been carried out to develop a framework that can be used to assess the impacts of sustainability factors on its built facilities and environment (Thomson *et al.*, 2009). They identified the absence of such studies and the lack of a comprehensive approach to integrate the existing individuals' research works that have been carried out, as a major problem. They further emphasised the need for a comprehensive and well developed framework that could be

applied to a range of sustainable construction projects. Thomson *et al.*, (2009) believed that the lack of such a common framework and agreement within which to consider sustainability principles has negatively impacted on the delivery of various forms of construction projects.

The complexities and implications of sustainability require different assessment strategies. According to Matar *et al*., (2008), sustainability as a requirement and outcome builds on a complex interface between various visible and invisible factors such as economic development, social and environmental issues. The conventional construction industry activity according to Cruickshank and Fenner, (2007), has focused on satisfying the projects' three requirements of time, cost and quality; however, a broader framework is needed to assist practitioners towards solutions that are responsive to addressing the sustainability challenges of society. To ensure a more sustainable construction future, it is therefore critical that practitioners do not restrict the construction output and the built facility overalls only to these outcomes, but also consider other factors which can potentially lead to improving the efficiency of a built facility in a sustainable manner resulting in lower operation and maintenance costs. Decision makers with sustainability objectives need to evaluate the impacts of their decisions both for the longer term as well as the shorter term and also other related issues as well (Jeswani *et al.*, 2010). Achieving sustainable development and sustainable construction which was advocated by the international protocols and agreement will require good policy frameworks and institutions that bring together all the stakeholders and the systems within the construction industry.

2.5 Sustainable Development - Policy and Practice

Sustainable development is a dynamic concept requiring a proactive and flexible approach to policy formulation in which the integration of social, economic and environmental policy objectives are fundamental (Bartle and Vass, 2007; DEFRA, 2005). It is a human phenomenon which requires human solutions. Since human needs are not static, it therefore implies that decisions that contribute to sustainability today may require some modification in the future to reflect the change in needs and aspirations of people. The United Nations (2010) identified and reinforced the centrality of human beings to sustainable development and the implementation of the policies of the Habitat Agenda. According to Brandon and Lombardi (2011), sustainability factors are complex and multidimensional, making policy and decision making processes difficult to understand outside the single context of environmental protection, hence the need for a holistic and integrated approach to the formulation of

sustainability policies. There is no doubt that sustainability considerations are inherently multifaceted and multidisciplinary, and as a result there are several issues that need to be addressed to develop a practical set of sustainability criteria to achieve the harmonisation of their objectives (Ugwu and Haupt, 2007). Carter and Fortune (2007) indicated that sustainable development policy represents one of the major issues for construction industry practitioners. The central principles of the sustainable development agenda has been emphasised in Agenda 21 which called on international, regional and national governments to develop parameters that can provide practical solutions and set out policies for decision-making. Agenda 21 sets out a comprehensive policy and action plan to guide development into the 21st century and also advocated for a holistic approach using an integrated practical-based management approach to achieve sustainable development (United Nations, 2010). According to the United Nations (2010), the inconsistencies in policies and ad hoc application approaches adopted by policy makers were the main reason why the integration of sustainable development policies and strategies were not achieving their desired goals. While there is a significant body of knowledge on the policy and practice of sustainable development, much of this available information is fragmented and presented in a form that is not convenient for policy makers and practitioners to understand and implement (United Nations, 2010). Brandon and Lombardi (2011) in their seminal work stated that the numerous research works done on sustainable development were fragmented and still at experimental stages with the major constraints being the lack of policy systems, continuous monitoring and implementation and access to data. The United Nations report also maintained that despite making some progress after Rio in 1992 and the World Summit on Sustainable Development (WSSD) in Johannesburg in 2002, there still remains a significant gap in terms of policy implementation and commitment in achieving the sustainable development goals (United Nations, 2011).

Sustainable development requires a long term perspective and broad-based approach to policy formulation, with a well-defined set of objectives which must be driven by a clear vision and commitment to achieve such objectives (Tippett *et al.*, 2007; SDC, 2003). The United Nations Secretary General, Ban Ki-moon in his recent address at the World Economic Forum in Davos, Switzerland, on the 28th January 2011 called for a revolutionary action to be taken to achieve the sustainable development and Millennium Development Goals agenda (United Nations, 2011). He emphasised the need for more comprehensive models and policies that are responsive to the developmental needs of present and future generations. Indeed the translation of sustainability policies into practice requires a clear understanding and

appreciation of sustainable development policies and features (Carter and Fortune, 2007). According to DEFRA (2005), the sustainable development policies that promote social and economic sustainability benefits also have the ability to offer long-term environmental sustainability benefits.

The performance of sustainability policy systems has been explored by many researchers over the years (Van Bueren and De Jong, 2007). Van Bueren and De Jong, (2007) went on to point out that many policy concepts on sustainability deliverables have not had the desired impact on sustainable projects in practice as we should have expected. Atkinson (2008) asserted that a good number of sustainable development programmes still revolves around weak and ineffective sustainability policies. Most of these policy initiatives on sustainability according to Van Bueren and De Jong (2007), exist in the abstract form, and in most cases never get conceptualised and operationalised into tangible goals. It is however suggested that, sustainable policy systems can offer an opportunity for practitioners by creating an atmosphere for innovation and improvement at all levels of sustainability implementation (Tawiah and Russell, 2008). Carter and Fortune (2007) identified gaps between sustainability policy and practice, and the lack of a common structured framework to assist practitioners involved in the delivery of sustainable projects. They went on to relate the difficulty of applying the principles and features of sustainability in a number of policy frameworks developed to date to either being the lack of basic features or being too overly complex for practitioners to understand.

It is crucial that sustainability policies address practical problems. A well balanced and thorough sustainable development policy-framework can serve as a catalyst to propel the sustainability agenda towards the achievement of tangible sustainable results. It has also been acknowledged that many policy frameworks for sustainable development projects sacrifice social and economic factors at the expense of environmental factors (Carter and Fortune, 2007). Many practitioners advocate the concept of sustainability but find it very difficult to put it into practice (Van Bueren and De Jong, 2007). Although industry actors seem to have accepted the concept in principle, implementing the policies and objectives of sustainability becomes very difficult (Van Bueren and De Jong, 2007). Such barriers to implementing sustainability policies demonstrate the difficulties and the lack of effectiveness inherent in these policy systems. The lack of a sense of urgency according to Van Bueren and De Jong (2007), is a major course for not implementing the sustainability policies to their required

targets to achieve incremental changes of sustainable development advocated by Agenda 21. They went on to advocate for greater efforts to improve sustainability policy systems, to enhance the sustainability performance and efficiency of the sustainability projects.

The sustainability concept according to Atkinson (2008) requires a defined set of objectives and critical assessment which must be driven by a well-defined policy and commitment to achieve such objectives. In acknowledging the importance of social and economic issues in the built environment, Carter and Fortune (2007) indicated that the policy makers and planners are required to map project specific issues against policy issues. Policy and decision makers must be seen to be directing and steering practitioners and society towards the attainment of a sustainable built environment through good and lasting policy initiatives, and rigorous process-oriented approaches (Van Bueren and De Jong, 2007). Accordingly, a significant change in policy and practice is needed to improve upon the sustainability requirements and performance of built facilities (Van Bueren and De Jong, 2007). It can be seen that a number of the existing policy frameworks for sustainable built environment projects place too much emphasis on "substance" to the detriment of "processes" needed to implement such policies (Van Bueren and De Jong, 2007). This leads to the inability to incorporate a suitable socio-economic sustainability benefit analysis into the policies and evaluation systems, as well as the decision making processes involving the sustainability projects. It must also be emphasised that the realisation of such objectives and the translation of sustainability policies into practice will certainly require well established institutional and governance structures which will serve as a vehicle to drive the policy and decision making processes towards sustainable development.

2.6 Institutional and Governance Structures

Over the years, a number of institutions and governance systems have been established to promote the sustainable development agenda (United Nations, 2010). Seemingly, while these institutions have existed in many organisations, particularly in the UKs construction industry, their modus operandi has remained limited to promoting the environmental side of sustainability. In some instances, these institutional and the governance systems have only received limited support to enable them to fulfil their core mandates (United Nations, 2010). According to the United Nations (2010), the limitations are fundamentally due to the structural weaknesses, inefficiencies and complexities inherent in the current institutional systems. This, in its view, has played a major role in limiting them from performing their core

functions they were designed to perform; which was to deliver sustainable development objectives. The earlier work of Van Bueren and De Jong, (2007) has also identified such inefficiencies, as well as the policies on which the institutional and governance systems were derived, as the reasons for their failure to fully promote sustainability objectives.

To date, many of such institutional and governance systems have remained ill equipped to attempt to address the multifaceted and multi-sectorial scale of issues of sustainability, occurring at the various levels of society (United Nations, 2010). However, delivering sustainable development which was advocated by Brundtland, and other United Nations reports, will require time and tested institutional and governance systems that are based on sound sustainability policies (United Nations, 2010; Van Bueren and De Jong, 2007). Using institutional systems that are well grounded on sustainability, according to Du Plessis, (2005), can enable the delivery of sustainable development at all levels of human endeavour, and in particular the Agenda 21 objectives at the local level. The need to ensure that Agenda 21 objectives are met also calls for a change and redirection of the objectives of institutional structures to reflect the local realities (United Nations, 2010). Making such changes to institutional structures should offer the opportunity for the construction industry organisations to initiate new approaches that are based on sound sustainability policies (May *et al*. 2008). Any reform aimed at strengthening the institutional systems of the organisations should address the three convergence criteria of sustainable development in a balanced and comprehensive way (United Nations, 2011), and not just pay lip service to its social and economic aspects. It is argued that the institutional and governance frameworks that clearly define their sustainable development agenda will have a great capacity to create the awareness which will get governments and their affiliated bodies to recognise the linkages between the sustainable development and sustainable regeneration objectives.

2.7 The Concept and Definition of Regeneration

HM Treasury (2007) defined regeneration as the process of reversing the physical and socio-economic and environmental decay of an area. According to Winston (2009), the concept of regeneration is seen as an intervention initiative which is aimed at addressing the deterioration of physical and environmental structures as well as the socio-economic conditions of the community in a sustainable manner. Reed (2007) described regeneration initiatives as an interactive process which focuses on the development of structures of which human beings are an integral part. Although the regeneration process is seen as a complex and dynamic one,

it provides the potentials that have a far reaching impact on society (Barrie, 2009; Yau and Chan, 2008).

Traditionally, the concept of sustainable regeneration has covered a wide range of different initiatives which have operated at various spatial levels (CLG, 2008; Glossop, 2008). Central to the regeneration concept is the potential to create a society that can become socially and economically viable and self-sustaining (Adair *et al.*, 2003). It is regarded largely as the most essential form of intervention and action to solve the developmental needs of the people, by addressing existing needs for present and the future generations (Granger, 2010). Fundamentally, regeneration is about closing gaps (CLG, 2010) and addressing spatial socio-economic sustainability disparities of communities (HM Treasury, 2007). CLG, (2008) pointed out that the pursuance of regeneration intervention can be justified for the reason that it helps to deal with equity issues existing within the society, particularly in situations where there are undesirable disparities in peoples' living conditions as a result of inequitable distribution of socio-economic resources. It is believed that if properly implemented, it will play a pivotal role in promoting sustainable development and also will contribute to the overall quality of life of society (SDC, 2003).

Consequently, sustainable regeneration assumes greater significance within the paradigm of sustainable development. It is also suggested that, laying more emphasis on socio-economic aspects of sustainability and integrating them into the regeneration delivery process will assist in tackling such developmental gaps the concepts are designed to address in a decisive manner (SDC, 2003). Therefore, the need to meet these demands calls for regeneration initiatives that recognise the importance of socio-economic sustainability factors as the main indicators of sustainable regeneration.

2.8 Sustainable Regeneration

The transformation of urban environments is often viewed largely in physical terms, for instance, the construction of a new hospital in a community (Boyko *et al*., 2006). It is seen mainly as an essential form of intervention and action to solve the developmental needs of society by addressing existing needs for the present and future generations (Granger, 2010). Regeneration means different things to different people. It has differing scales of programmes that promote socio-economic growth and improves the quality of life of local communities (CLG, 2008). It involves targeting specific groups of people considered to be disadvantaged

and lacking basic necessities of life (Ball, 2004); and signifies a response to the problems of deprivation by seeking to promote socio-economic prosperity, participation and enhancement of life (Smith, 2006). The Office of the Deputy Prime Minister's report (ODPM, 2005) identified five key elements of sustainable regeneration in relation to planning systems as: sustainable economic growth; social cohesion and inclusion; protection and enhancement of the natural environment; prudent use of natural resources; and the integration of sustainability into development plans. In its most recent iteration, five key elements of sustainability were identified in relation to the integration of sustainable regeneration in urban development plans.

While planning systems and regeneration programmes are basically concerned with the transformation of the physical environment through the provision of infrastructure, it is acknowledged that the nature of regeneration planning and development must be appropriate and balanced for the needs and aspirations of the area (Evans *et al.*, 2009). A poorly planned and designed sustainable regeneration project can form the basis of social conflict (Yau and Chan, 2008). For that reason, recognising the requirements of an area is essential in determining where the greatest needs are in terms of regeneration and development. The processes of delivering regeneration therefore require careful planning and a responsive consideration for the demographic composition of local conditions (CLG, 2008). Sustainable regeneration is crucial to the success and survival of sustainable communities, and is at the heart of socio-economic progress of individuals living in such communities (SDC, 2003). Attempts to deal with the social and economic challenges of deprived communities in a way that tackles unemployment and homelessness for example, will require regeneration policies and strategies to focus on initiatives which are important to delivering the social and economic sustainability benefits of the projects (Clapham, 2014; Rickey and Houghton, 2009).

2.9 UK Sustainable Regeneration Policy Drivers

A plethora of policy systems and strategies have been developed over the years for the purpose of providing an impetus for sustainable development and regeneration (Lam *et al.*, 2011; Van Bueren and De Jong, 2007). Different objectives have underlined these regeneration policy systems and strategies. While some of them have focused on delivering sustainable development objectives, others have placed emphasis on the achievement of different sets of objectives. The main objectives of the UK government's sustainable

development policy for instance, has focused its strategies on addressing the underlying social and economic challenges and providing support for people particularly in the most deprived communities, to access new opportunities in a number of areas (CLG, 2008). These policies have formed the basis on which many organisations, including the construction industry organisations have fashioned out their sustainability policies to articulate and drive sustainability issues within their organisations.

The introduction of such government policy systems has played a major role in directing many regeneration activities, both at the national and local levels in the UK. Many organisations operating at these levels have aligned their sustainability policy objectives to the policy objectives set out by such government policy systems. However, the performance of these policy systems has been undermined by a number of factors. The dynamic nature of sustainability has often been cited as the possible reason, coupled with the scarcity of financial resources (DBIS, 2013) as well as conflict of interest by organisations who attempt to promote sustainability issues within their organisations. This has resulted in many organisations' inability to fully translate their sustainability policies into practice.

In the construction industry for instance, sustainability has been promoted on a number of sustainable regeneration projects, but with limited sustainability benefits for the intended beneficiaries (Van Bueren and De Jong, 2007). Numerous sustainability policies of many organisations currently promoting sustainability in the construction industry are based on weak sustainability policy systems, and in most cases, on wrong sustainability principles (Van Bueren and De Jong, 2007; Carter and Fortune, 2007). The delivery of the present sustainable regeneration projects can also be seen as the direct product of the policy systems currently in practice. It is believed that sustainable regeneration objectives can only be well promoted if the policy systems are anchored on strong sustainability policies and when such policies are pivoted on sustainable development objectives (Carter and Fortune, 2007). In that sense, the issues relating to conflict of interest as well as resources can then be relegated to the background.

Consequently, in attempt to define the scope of sustainable regeneration projects, it is crucial that adequate consideration is given to the policy systems meant to drive the sustainability aspects of the projects (CLG, 2010). To a very large extent, sustainability content in any construction project can be well promoted and regulated when the organisations'

sustainability delivery strategies are based on sound sustainability policy systems (Häkkinen and Belloni, 2011). In acknowledging the importance of a strong sustainability policy system, Kaatz *et al.*, (2006) called on policy makers and construction industry practitioners to redefine their sustainability policy objectives to better reflect the current issues and challenges of sustainability, both at the conceptual and operational levels of practice. Effective sustainability policy systems, according to Nicol (2011), are crucial in setting the necessary conditions that provide the vehicle for a positive change.

Many authors and reports have also acknowledged the importance of a sustainability policy for the successful promotion and delivery of sustainability benefits, and in particular the socio-economic ones (United Nations, 2010; Pitt *et al.*, 2009; Colantonio, 2008; CLG, 2008). As part of the UK government's sustainability policy initiatives to improve on sustainable regeneration programmes, between 2007 and 2011, over £13bn was committed in programmes that were meant to contribute heavily to the promotion and delivery of socio-economic regeneration benefits (CLG, 2008). In their recent work on urban regeneration, Lombardi *et al*., (2011: 81) have argued that adding the 'sustainability concept to urban regeneration policy' can be helpful to provide a platform towards the promotion and delivery of a wide range of sustained socio-economic benefits for communities. Apparently, to deliver a wide range of improved socio-economic sustainability outcomes to benefit various groups of people for the long term, calls a for sustainable regeneration policy system which considers a broad range of sustainability issues. It is argued that it is only when such varieties of issues are considered and factored into the policy systems, that long term social and economic sustainability benefits can be delivered in a holistic manner, to meet the needs of a variety of people.

A view held by authors such as Carpenter, (2011); Carter and Fortune, (2007) and Smith (2006) is that sustainable construction should not only focus on addressing the environmental sustainability features, but they should also consider the broader issues that relate to the delivery of the social and economic sustainability factors of the projects as well. Doing so, in their view, will enable sustainability-oriented projects to deliver on a range of socio-economic sustainability benefits. It is asserted that the improvement of sustainability content in construction projects goes beyond just using sustainability materials to deliver the projects. It is also about getting the right sustainability policies and strategies in place to deliver all the sustainability aspects of the projects.

In terms of sustainable regeneration, for the projects to deliver such a wide range of socio-economic benefits for different groups of people, the policy systems would have to be designed to promote a variety of sustainability factors such as; employment opportunities, education and training, health and safety, security, and housing as well as an improvement to the physical environment where the projects are sited (Reyes *et al.*, 2014; East Sussex Economic Development Strategy (ESEDS), 2012; Nicol, 2011; Carpenter, 2011; Winston, 2009; Pitt *et al*., 2009; CLG, 2008; HM Treasury, 2007; Colantonio, 2007; Smith, 2006). According to Dixon (2006), the creation and retention of employment opportunities as well as the promotion of other welfare factors such as health and safety and security, and access to affordable housing, is one important means to achieve successful regeneration. It is believed that the attainment of these sustainability factors will create an enabling environment to attract new businesses and inward investment, and also promote socio-economic sustainability growth of the entire community, leading to a return on investment for providers (Pitt *et al.*, 2009; CLG, 2008; Yau and Chan, 2008; Treasury, 2007).

Working towards a greater achievement of sustainable regeneration objectives requires a greater consideration and promotion of social and economic sustainability factors, since achieving them will have a profound impact on all facets of societal life (CLG, 2008). While the main objective of economic regeneration is concerned with the improvement of people's economic prosperity, social regeneration on the other hand, is geared towards addressing issues relating to peoples' welfare. Promoting economic factors such as; sustainable jobs and inward investments to boost economic growth become very important for regeneration projects. Likewise, social factors involving the promotion of skills development, health, safety and security and housing are crucial to enable people to feel safe and happy to live in a particular area (SDC, 2003).

Empirically, the provision of sustainability factors such as employment and education and training is seen to be correlated to economic growth (Spangenberg, 2005). A study conducted by Mak and Peacock (2011), in which they explored the sustainability concept using a case study approach in the UK, USA and Australia, also found strong linkages between social and economic sustainability factors in the areas of affordable housing, skills development and job/employment opportunities. Many other studies have also established the existence of such strong linkages between the social and economic sustainability factors, considered as the bedrock of attaining a successful sustainable regeneration (Pitt *et al.*, 2009; Smith, 2006;

Economic Scrutiny Committee (ESC), 2006). The ESC report (2006), for example, has argued that providing opportunities to advance the education and skill requirements of individuals has the potential to build such individuals capacities for sustainable employment. Also by securing sustainable employment, such individuals are then empowered to contribute to the economic growth of their localities (ESC, 2006). A subsequent work by Nwokoro and Onukwube (2011) has also revealed that improving the education and skills requirements of a workforce would potentially lead to the enhancement of their skills capacity in the delivery of sustainability objectives of projects. In echoing the point further, One NorthEast, (2009: 14), suggested that the development of individuals' 'skills characteristics are crucial to their ability to access employment opportunities and, this, in turn, strongly influences their decisions about where to live and work'.

Ensuring a safer and sound environment where people are happy to live, also calls for regeneration policies to promote the physical environment and outlook of the projects (Smith, 2006). Doing so will not only make the local environment attractive, but will also help to attract inward investment and enable local businesses to thrive (HM Treasury, 2007; Smith, 2006). It is suggested that areas that are regenerated should attract and retain investment and promote sustainable economic growths of such areas (ESC, 2006). Some other sustainability factors that can impact on the physical attractiveness of an area are the provisions of decent and affordable housing, as well as other public facilities and services (CLG, 2008; Yau and Chan, 2008; Smith, 2006). The promotion of decent housing alongside other public facilities and services, according to Carpenter (2011) and Hills (2007) can impact on the physical appearance of the area, serve as a catalyst for local employment, and drive the local economy towards a sustainable growth. A good housing policy can be a major driving force for wealth creation and investment in people and the community as a whole (Abidin, 2013). In a study conducted by Dixon (2006) on sustainable development and brownfield regeneration, the majority of housing regeneration practitioners who participated in the study were of the view that the provision of housing with its associated facilities and services, was an important factor in achieving successful sustainable regeneration for the people. Similarly, the East Sussex Economic Development Strategy (ESEDS, 2012) has also identified housing as a major determinant of sustainable regeneration. The strategy went on to indicate that, giving adequate attention to the characteristics of the local housing supply, type (mix), and price (affordability) was a major step towards addressing the socio-economic disparities among the

communities. Given such adequate consideration, the strategy also believed it was vital in raising the standard of life and well-being for people and their communities.

Attempts to deliver sustainable regeneration that ensures a higher quality of life and a more productive society for high and stable socio-economic growth, also requires adequate consideration of health and safety factors by sustainable regeneration policy systems. 'The construction industry has a huge contribution to make to our quality of life' (DETR, 2000: 7). This can be manifested in the kind of policy and approach the industry adopts to ensure adequate health and safety of its workforce and the society. Apparently the UK government's sustainability policy system recognises the crucial role health and safety plays, by setting requirements to regulate health and safety issues in and around construction projects (DETR, 2000). The Rethinking Construction Committee Report (1998), chaired by Egan, raised concerns about the consequence of a poor health and safety record of construction activities and the potential dangers such poor records pose to the entire construction industry towards the promotion of sustainable construction. In response to such poor records and the recognition of the possible effects on sustainable regeneration, the Review of Sustainable Construction Strategy for sustainable construction emphasised the need for a 'greater uptake of training programmes', to improve skills and knowledge, and to increase the 'retention rates of skilled workers within a safer industry' (CLG, 2007: 101). It is believed that promoting good health and safety practices adequately and ensuring the right working environment will enable people to attain their social sustainability objectives (Nwokoro and Onukwube 2011). The UK sustainable regeneration policy drivers and the literature sources are shown in Table 2.1 below.

Table 2.1: UK sustainable regeneration policy drivers and literature sources

Regeneration policy drivers	Literature sources
To provide decent and affordable housing and facility	Clapham, 2014; Abidin, 2013; ESEDS, 2012; Mak and Peacock, 2011; Nicol, 2011; Carpenter, 2010; Pitt *et al*., 2009; Hill, 2007; Colantonio, 2007; Dixon, 2006; Smith, 2006
To improve the physical outlook	Reyes *et al.,* 2014; ESEDS, 2012; Nicol, 2011; Carpenter, 2010; CLG, 2008; Hill, 2007; Colantonio, 2007; Smith, 2006
To improve health, safety and security	Clapham, 2014; ESEDS, 2012; Nwokoro and Onukwube 2011; Nicol, 2011; NorthEast, 2009; Dixon, 2006; Smith, 2006; DETR, 2000
To improve public services and facilities	Clapham, 2014; Carpenter, 2010; CLG, 2008; Yau and Chan, 2008; Hill, 2007; Smith, 2006
To provide education and skills training	Clapham, 2014; ESEDS, 2012; Nwokoro and Onukwube, 2011; Mak and Peacock, 2011; Nicol, 2011; NorthEast, 2009; Pitt *et al*., 2009; CLG, 2007; Colantonio, 2007; ESC 2006; Smith, 2006; Spangenberg, 2005
To improve the local economy and create wealth	Clapham, 2014; Abidin, 2013; Carpenter, 2010; Pitt *et al.,* 2009; CLG, 2008; HM Treasury, 2007; Hill, 2007; ESC, 2006
To promote economic development and growth	Clapham, 2014; Nicol, 2011; Carpenter, 2010; Pitt *et al.,* 2009; HM Treasury, 2007; Hill, 2007; Smith, 2006; ESC, 2006; Spangenberg, 2005
To generate profit	Pitt *et al.*, 2009; CLG, 2008; Yau and Chan, 2008; HM Treasury, 2007
To create employment opportunities	Clapham, 2014; ESEDS, 2012; Mak and Peacock, 2011; Nicol, 2011; Carpenter, 2010; Pitt *et al*., 2009; NorthEast, 2009; Hill, 2007; Colantonio, 2007; Smith, 2006; ESC 2006; Dixon, 2006; Spangenberg, 2005
To promote investment in local businesses	Nicol, 2011; Pitt *et al.,* 2009; CLG, 2008; HM Treasury, 2007; ESC, 2006

2.10 Sustainable Regeneration Drivers

The construction industry has been recognised as a major driver in the delivery of the UK sustainable development and regeneration agenda (DBIS, 2013; Department for Business, Enterprise and Regulatory Reform (DBERR), 2008). The UK government's strategy to deliver sustainable construction set the agenda and challenged the construction industry to drive its operations in a manner that delivers sustainable products to achieve the sustainable development and regeneration objectives. The industry is being called upon to shift from its traditional way of delivering sustainability projects to a more modernised one which will ultimately lead to improving the sustainability performance of their projects (DBIS, 2013).

Delivering the objective of sustainable construction practices across the industry is a challenging process which requires a paradigm change if the industry is to achieve sustainable construction and remain competitive.

Traditionally, the construction industry has been driven by cost, time and quality objectives (Cruickshank and Fenner, 2007), and the consideration of sustainability adds to these objectives. Striving to achieve sustainable construction calls for the adoption of sustainability practices in a manner that makes projects achieve their socio-economic benefits for society and the organisations providing the projects (Shen *et al*., 2010). Promoting the concept of sustainable construction also has enormous potential to drive the regeneration process towards the attainment of sustainability objectives. It has been argued that many sustainable regeneration features share many goals with sustainable development features. Hence, the attainment of sustainable regeneration can be the determinant of sustainable development.

The UK government's White Paper published in 2000 on urban renewal which sets out the government's plans to drive urban regeneration recommended the need to improve the social and economic sustainability growth of society with sustainable regeneration initiatives (CLG, 2008). Generally, the performance of regeneration projects is demonstrated and driven by many of the opportunities created by these regeneration projects. In a series of stakeholder consultation events reported in CLG (2008), the majority of participants suggested that socio-economic development should be seen as a key driver for sustainable regeneration outcomes. The participants emphasised the need for sustainable regeneration to pay a greater attention to deliver tangible and sustainable benefits in a holistic manner.

It has been acknowledged that a significant number of regeneration initiatives, which have been formulated to deliver regeneration projects, have been driven by a number of factors (CLG, 2010). Some influencing factors reported to be driving most practitioners' organisations in promoting sustainability in the UK include: incentive mechanisms, government policy frameworks and legislations on green buildings (Turcsanyi and Sisaye, 2013; RICS Europe, 2013; Häkkinen and Belloni, 2011; CLG, 2010; Pitt *et al*., 2009; Lankoski, 2008; Bennett and Crudgington, 2003).

Empirical work by Pitt *et al*., (2009), which collected data from 200 Royal Institute of Chartered Surveyors (RICS) members in the UK, has also found financial incentives, building

regulations, client awareness and demand as the most influential factors that were driving many construction industry organisations to promote sustainability on their projects. Other drivers identified by Turcsanyi and Sisaye (2013), in line with Pitt *et al.'* s (2009) findings for adopting sustainability principles include; image/reputation improvement, and meeting ethical and moral obligations, as well as an improvement in the overall economic fortune of their organisations.

For many construction organisations involved in the delivery of regeneration projects in the UK, their socio-economic regeneration strategies have focused on financial gains (Henderson, 2011; Smyth, 2008; Madlener *et al*, 3003). In a study conducted by Smith and Sharicz, (2011) on organisation sustainability and profitability, nearly 51 percent of respondents who took part in the study believed that adopting sustainability into their organisations' business operations would help build the economic future of their organisations. Pursuing such sustainability principles, Okoro, (2012) and DBERR, (2008), believed will enable such organisations to improve their image as 'sustainable organisations', which in turn, will enable them to increase their profitability and remain in business for a long time. Integrating the core elements of sustainability in regeneration processes and practices offers a considerable opportunity for construction organisations to run a responsible business. For example, integrating the principle of corporate social responsibility (CSR) in an organisation's strategies and practices will enable the organisation to enhance its reputation, gain competitive advantage and also continue to win more contracts from its clients.

A Corporate Social Responsibility (CSR) study carried out by Turcsanyi and Sisaye (2013: 16) suggested that the overall economic performance of an organisation 'can be sustained for a long time if economic performance is effectively integrated with social and environmental goals into business strategic plans'. In support of the above work, Cheng *et al.*, (2014), Mason and Simmons (2014) and Lankoski, (2008) indicated that, by integrating CSR and other sustainability objectives into the organisation's business practices, such organisations stand a better chance of enhancing its performance economically, and also is more likely to gain competitive advantage over its compatriots in the market place. Adopting sustainability principles of corporate social responsibility are now being seen as a means by which many organisations are promoting their social and economic sustainability objectives (Pitt *et al*, 2009; Colantonio, 2007). Similarly, it is argued that adopting CSR principles in the form of education and training/apprenticeships, job opportunities etc., on regeneration projects could

equally be seen as a means of promoting ethical and moral obligations towards the society (Okoro, 2012; Martinuzzi *et al*., 2011; EPH, 2008; ODPM, 2006). A round table report on CSR by the European Multi-stakeholder Forum (2004), has identified many small and medium enterprise (SMEs) organisations who have integrated CSR principles into their business practices as a result of the ethical values and beliefs held by the owners and employees of the organisations. Apparently, integrating sustainability principles into business plans for many organisations would enable them to 'position and differentiate themselves as ethically responsible and committed in order to increase their global competitiveness' (Okoro 2012: 684). Moreover, obtaining such competitive advantage, would enable such organisations to gain competitive edge over their main competitors and continue to win future contracts from their clients (Okoro, 2012; Kraus and Britzelmaier, 2012; Henderson, 2011; Häkkinen and Belloni, 2011; de Francesco and Levy, 2008; West, *et al.*, 2008; Lankoski, 2008; Weber, 2008; Khalfan 2006). CSR principles of sustainability in construction business terms is about achieving a long term competitive advantage and economic benefits for construction organisations and their stakeholders involved in the delivery of the projects (Shen *et al*., 2010). Adopting sustainability principles, most organisations believe can lead to them building their reputations, enabling them to remain viable and increase their profit margins (Turcsanyi and Sisaye 2013; Okoro 2012; Kraus and Britzelmaier, 2012; Smith and Sharicz, 2011; Anvuur; *et al*., 2011; Drews, 2010; Pitt *et al*., 2009; Demacarty, 2009; Lankoski, 2008; Weber, 2008; Ang and Wilkinson, 2008; DBERR, 2008; CECGP, 2001). According to Weber (2008), promoting good sustainability practices could potentially lead to cost savings and reductions in financial risk for the organisations in the long term. Similarly, it is suggested that the achievement of a higher standard in sustainability performance of an organisation can influence the attraction and retention of employees (Turcsanyi and Sisaye 2013; Häkkinen and Belloni, 2011; Kraus and Britzelmaier, 2012; Lankoski, 2008; Weber, 2008). A good organisational reputation and image can boost the morale of employees working for such organisations. Lankoski, (2008: 540) agreed to the above view by highlighting that with employees, sustainability practices may result in the organisations 'ability to hire and retain high-quality staff as well as improve worker health and morale'.

Seemingly, the quest to promote sustainability principles also calls for commitment from key practitioners and their organisations, clients and other major stakeholders, because without such commitment, it would be impossible to genuinely and adequately promote the principle and its core values in any particular regeneration project, to realise its benefits. A widely held

view is that commitment from top managements of an organisation can be a major driving force towards the adoption of sustainability into the organisation's business practices. Commitment from top management and the nature of their governance structures within the organisations are other factors, which are often cited as major influencing drivers towards the promotion of sustainability practices by many organisations (Turcsanyi and Sisaye 2013; Smith and Sharicz, 2011; Häkkinen and Belloni, 2011). It is believed that regeneration projects would make greater sustainability impacts when genuine commitment is obtained from the top management of construction organisations and when they are truly committed to championing its core values. In that way, greater attention will be given to incorporating its principles into their governance and business operations and not just mere mention of it in their mission statements on their organisations' websites.

It is also argued that the demands from clients and their stakeholders can be a determining factor for promoting sustainability principles by organisations. This is becaus clients and their stakeholders are the ones who initiate and provide the financial resources to undertake these projects. The Green Paper report of the Commission of the European Communities, (CECGP, 2001: 3) has found a number of organisations operating within the European Union to be promoting their sustainability principles 'as a response to a variety of social, environmental and economic pressures' from their clients and other key stakeholders. It is asserted that the adoption of sustainability for most of these projects has been determined, and in many cases dictated by the requirements and demands from clients and their stakeholders (RICS Europe, 2013; Akadiri *et al.,* 2012; Kraus and Britzelmaier, 2012; Häkkinen and Belloni 2011; Drews, 2010; Pitt *et al*., 2009; Edum-Fotwe and Price, 2009; Lankoski, 2008). Highlighting on this point, Turcsanyi and Sisaye, (2013) further argued that with the current economic crisis, clients and other key stakeholders are increasingly becoming cautious and are demanding more details and transparency from organisations before entering into any form of investment or partnership with them. Table 2.2 shows the summary of the influential sustainable regeneration drivers and the literature sources.

Table 2.2: Summary of influential sustainable regeneration drivers and the literature sources

Sustainable regeneration drivers	**Literature source**
Reputation / image enhancement	Cheng *et al.*, 2014; Turcsanyi and Sisaye 2013; Okoro 2012; Kraus and Britzelmaier, 2012; Smith and Sharicz, 2011; Anvuur; *et al*., 2011; Drews, 2010; Pitt *et al*., 2009; Demacarty, 2009; Lankoski, 2008; Weber, 2008; Ang and Wilkinson, 2008; DBERR, 2008; CECGP, 2001
Competitive advantage	Okoro 2012; Kraus and Britzelmaier, 2012; Henderson, 2011; Häkkinen and Belloni, 2011; Shen *et al*., 2010; de Francesco and Levy, 2008; West *et al.*, 2008; Lankoski, 2008; Weber, 2008; Khalfan 2006
Client requirement	RICS Europe, 2013; Turcsanyi and Sisaye, 2013; Akadiri *et al.*, 2012; Kraus and Britzelmaier, 2012; Häkkinen and Belloni 2011; Drews, 2010; Pitt *et al*., 2009; Edum-Fotwe and Price, 2009; Lankoski, 2008; CECGP, 2001
Legislation and legal requirement	Turcsanyi and Sisaye, 2013; RICS Europe, 2013; Häkkinen and Belloni, 2011; CLG, 2010; Pitt *et al*., 2009; Lankoski, 2008; Bennett and Crudgington, 2003.
Ethical and moral obligation	Mason and Simmons, 2014; Turcsanyi and Sisaye, 2013; Okoro, 2012; Martinuzzi *et al.*, 2011; EPH, 2008; ODPM, 2006
Stakeholder demand	RICS Europe, 2013; Turcsanyi and Sisaye, 2013; Kraus and Britzelmaier, 2012; Häkkinen and Belloni 2011; Drews, 2010; Pitt *et al*., 2009; Edum-Fotwe and Price, 2009; Lankoski, 2008
Commitment to sustainability	Turcsanyi and Sisaye 2013; Smith and Sharicz, 2011; Häkkinen and Belloni, 2011
Corporate social responsibility	Turcsanyi and Sisaye, 2013; Shen *et al*., 2010; Pitt *et al*, 2009; Colantonio, 2007; EMF, 2004;

2.11 Sustainable Regeneration Barriers

In spite of the numerous potential benefits identified for the sustainability principles in sustainable construction and regeneration projects, there are also barriers or challenges associated with adopting the principles. Van Bueren and De Jong (2007) have emphasised that the introduction of the sustainability concept into construction projects had brought about new opportunities and challenges to construction industry practitioners. Accordingly, this has culminated in the emergence of numerous initiatives and studies in the UK, in an attempt to maximise the potential opportunities and also find a lasting solution to the challenges (DBIS, 2013; Dixon, 2006). The CLG (2010) report, for example, argued that several attempts to deliver sustainable regeneration to date have been seen to be only partial in their nature, due to such perceived challenges. The report went on to encourage regeneration practitioners to pursue change towards achieving greater sustainable regeneration solutions. It further challenged practitioners to be prepared to act on any evidence, pointing to a lack of sustainability success on the regeneration projects.

Apparently, acknowledging such challenges has led to the development of various management strategies and policy systems to guide and direct practitioners to achieve higher and improved sustainability standards for their projects. However, despite the emergence of these policy systems, strategies and the growing emphasis on higher sustainability standards, numerous studies undertaken to date have revealed that the construction industry has been very slow and reluctant in its approach to respond to such sustainability challenges (Dixon, 2006). Several writers have attributed the slow response to adapt to a new way of delivering sustainable construction products to a number of barriers associated with the policy objectives existing within the organisations (Van Bueren and De Jong, 2007). Carter and Fortune (2007), for example, identified barriers with the sustainability policy systems, and the inconsistent manner in which such policies were being applied in practice. They went on to relate the challenges to the conflicting nature of organisations' sustainability objectives vis-a-vis their policy systems, which they argued, were either too basic or too overly complex to understand and apply in practical terms. Conflict of interest between top management attitudes towards sustainability and organisational culture of profit making was also seen as a major barrier which was dictating their sustainability agenda (Kraus and Britzelmaier, 2012; Presley and Meade, 2010). It has also been suggested that many sustainable regeneration projects have been planned without the fundamental components of social and economic sustainability as a parallel strand, resulting in many regeneration projects' inability to deliver on such shared objectives underlying the socio-economic regeneration agenda (Winston, 2009; Smith, 2006).

Earlier work done by Coaffee (2004) suggested that previous attempts meant to deliver sustainable regeneration projects were seen to be lacking the vision of improving the socio-economic sustainability needs of the communities. His work was subsequently corroborated by the Audit Commission report (2007). The report revealed that many regeneration activities initiated to date are yet to have a consistent, socio-economic impact on the most deprived localities they were sited. For example, it was said that the level of long-term unemployment in such 'so called regenerated' areas has remained stagnant, and targeted work to develop employable skills for people to gain employment within such regenerated areas has remained undeveloped. Since socio-economic disparities are seen to be directly rooted in our community set up, focusing on socio-economic regeneration has enormous potential to drive local communities towards becoming more sustainable communities (Smith, 2006).

Although construction industry practitioners seem to have accepted the sustainability concept in principle, applying its core principles has been lacking and in many instances becomes very difficult to pursue in practice (Van Bueren and De Jong, 2007). The lack of understanding of sustainability factors among stakeholders, coupled with unidentifiable benefits to practitioners has also been cited as some of the barriers for the construction industry's inability to fully embrace the principles of sustainable construction and regeneration practices (Brandon and Lombardi, 2011; Evans and Jones, 2008). Such misunderstandings have often led to misapplication of sustainability which in Matar *et al.,* (2008) opinion has accounted for sustainability from being standard industry practice and which has limited its implementation in the area of sustainable regeneration.

Indeed, sustainable construction as it is seen as a relatively new concept within the construction industry, presents a major challenge as many organisations attempt to adopt the concept (Presley and Meade, 2010). The lack of awareness of sustainability benefits and lack of demand from stakeholders, the absence of a business case for sustainability, and the lack of a planning policy to enforce its adoption and implementation on construction projects have all been reported as major barriers (Pitt *et al.*, 2009) for social and economic sustainability not being dominant in the delivery of sustainable regeneration projects. According to Van Bueren and De Jong (2007), numerous barriers to promoting sustainability derive from the institutional systems within which policies were being formulated. Underlying these institutional systems, are the financial objectives that were found to be responsible for the failure of many of the organisations' sustainability policies. Many studies carried out on sustainability and sustainable regeneration have also cited limited or lack of financial resources as a main barrier, mainly by small to medium scale organisations, to taking on sustainability issues on their projects (Kraus and Britzelmaier, 2012; Haran *et al.*, 2011; Carpenter, 2011; Pitt *et al.*, 2009; Kaatz *et al.*, 2006; EPH, 2008; Adair *et al.*, 2003). In recent times the credit crunch, in Haran *et al.* (2011) and Parkinson, *et al.'s* (2011) views, has also contributed to the lack of financial resources to pursue sustainable construction projects in the UK. Rickey and Houghton (2009) pointed out that sustainable regeneration policies and practices of most organisations have tended to focus on commercial aspects rather than the long term impacts and shared benefits associated with its implementation. Later work done by Granger, (2010) has supported this view by highlighting that at a local community level, the delivery of such sustainable regeneration initiatives has consisted of expensive projects largely propelled by financial considerations. As a result, many of the organisations were only

interested in pursuing construction projects that had more commercial incentives (Carpenter, 2011).

Generally, the issues relating to the adoption and implementation of sustainability have been perceived as carrying a higher financial burden, with limited or no return on investments for practitioners and investors. The perception of high cost of investment and lower investment returns for sustainability requirements in contrast to traditional projects are often seen as barriers for the adoption and implementation of sustainability (Häkkinen and Belloni, 2011; Lam *et al.,* 2009). Such additional cost perception associated with sustainability and lower investment returns, have hindered the construction industry organisations from pursuing the principles of sustainable regeneration as required. Although such cost perceptions still persist, particularly when it comes to sustainable regeneration projects, it is believed that the initial cost of investment can be offset if practitioners take a long term view of sustainability impacts and benefits for themselves and their stakeholders. To take a long term view of the impact of sustainability means that practitioners would have to be encouraged to pursue change towards sustainable solutions (Nicol, 2011). Equally, looking at such long term benefits and impacts would also call for a change of attitude and mind-set from practitioners. Similarly, practitioners understanding of sustainability impacts and benefits to their organisations and other stakeholder groups including clients, will have to be enhanced.

Other dominant barriers identified as hindering the successful adoption and implementation of sustainable construction include conflict with stakeholder interests and a lack of expressed interest and demand for sustainability issues from clients and also from different groups of stakeholders (Pitt *et al.,* 2009; Matar *et al.,* 2008; Khalfan, 2006; Williams and Dair, 2006). Seen as a key factor towards the adoption and implementation of sustainability is the client, who is 'the principal stakeholder in determining a sustainable construction approach' to be adopted on a particular project (Pitt *et al.,* 2009: 220). According to Khalfan (2006), the lack of interest and awareness of issues relating to sustainability benefits has been a major stumbling block and this has impeded many practitioners from taking on sustainable construction practices as an integral part of their operations. A study by the Reed Research Group which was cited in Matar *et al.* (2008), revealed that more than 60% of construction industry practitioners do not even attempt to practice sustainability projects. Their findings also discovered that just around 32% of construction clients have shown an interest in pursuing sustainable construction projects. These findings were further corroborated by Pitt *et*

al.'s (2009) study on sustainable construction barriers, in which the majority of respondents ranked lack of client demand and awareness as the most significant barriers that were impeding them from adopting sustainability on their projects.

However, overcoming these barriers to achieve greater sustainability impacts and benefits particularly in terms of socio-economic ones, will require a concerted effort from practitioners (Nicol, 2011; Cornelius *et al.*, 2009). It is suggested that greater sustainability impacts can be achieved if practitioners, including clients, recognised the benefits of pursuing the sustainability agenda for themselves and for their stakeholders, and accordingly respond to these challenges (DBIS, 2013; SDC, 2008). It is believed that the way and manner practitioners respond to such challenges is critical in determining the progress towards the achievement of the required sustainability benefits, in particular the socio-economic benefits of sustainable regeneration projects (SDC, 2008). The summary of sustainable regeneration barriers and the literature sources are shown in Table 2.3 below.

Table 2.3: Summary of sustainable regeneration barriers and the literature sources

Sustainable regeneration barriers	**Literature source**
Conflict with organisation business objectives	Kraus and Britzelmaier, 2012; Presley and Meade, 2010; Van Bueren and De Jong, 2007; Carter and Fortune, 2007
Unfavourable contract requirement	Pitt *et al.*, 2009; Matar *et al.*, 2007; Khalfan, 2006
Social and economic not a priority	Brandon and Lombardi, 2011; Pitt *et al.*, 2009; Winston, 2009; Audit Commission report, 2007; Smith, 2006; Coaffee, 2004
Conflict with stakeholder interest	Pitt *et al.*, 2009; Matar *et al.*, 2007; Khalfan, 2006
No tangible benefit for organisation	Brandon and Lombardi, 2011; Pitt *et al.*, 2009; Evans and Jones, 2008
Perception that sustainability is costly	Häkkinen and Belloni, 2011: Lam *et al.*, 2009
Lack of client interest / willingness	Pitt *et al.*, 2009; Matar *et al.*, 2007; Khalfan, 2006; Williams and Dair, 2006
Lack of financial resource	Kraus and Britzelmaier, 2012; Haran *et al.*, 2011; Carpenter, 2011; Pitt *et al.*, 2009; Kaatz *et al.*, 2006; EPH, 2008; Adair et al., 2003

2.12 Types of Regeneration Projects

Sustainable regeneration is a vital aspect of the UK sustainable development agenda in which a lot of effort has been made over the years to provide regeneration projects in the areas of housing and other flagship projects (SDC, 2003). The UK's regeneration strategy has conventionally been designated and defined by area-based initiatives mainly by the public sector and the property development industry (Dixon, 2006). The literature review has shown that the regeneration initiatives have traditionally and fundamentally been centred on three main types of projects; housing, public and private sector commercial projects (Dixon, 2006; SDC, 2003). Traditionally, the UK regeneration strategy has evolved from the provision of affordable housing through to the provision of other public sector projects, and later to private commercial regeneration projects. The growing pressures on national and local governments to meet the infrastructural needs of communities has accounted for this development. The formation of these project types has set the context and served as an indicator for performance evaluation of the sustainable regeneration agenda by built environment practitioners. Using these project types has created a broader framework on which regeneration practitioners have continued to espouse and measure the performance of a range of sustainable regeneration projects.

It is believed that combining the efforts and benefits from this range of regeneration projects would have a more far-reaching impact than if it were just one form of regeneration project. Consequently, the provision of these types of project assumes a greater significance within the paradigm of the sustainable regeneration development agenda. The delivery of housing-led regeneration, for an example, can contribute to improving the wellbeing of communities through the provision of affordable houses, while the provision of public and private sector facilities such as schools and shopping centres, has the potential to deliver other socio-economic sustainability objectives such as jobs, etc, for communities. The linkages between housing, school building and shopping centres provide an opportunity to deliver various types of regeneration projects. It is believed that different regeneration schemes designed to improve sustainable infrastructure will give additional impetus to the creation of sustainable regeneration and development of an area. The notion that regeneration is about creating places where people want to live and work should mean that a good balance of regeneration projects would have to be achieved to help satisfy the notion (CLG, 2009; Glossop, 2008). It is suggested that sustainable regeneration would be successful if adequate attention is given to

the current evaluation frameworks in practice; to better respond effectively to the current challenges and requirements posed by the sustainability agenda (Kaatz *et al.*, 2006).

2.13 Social Sustainability Principles of Sustainable Regeneration

The social dimension of sustainability has been recognised as an essential aspect of delivering sustainable regeneration, development and communities (Mak and Peacock, 2011; Colantonio, 2008) and a major requirement for evaluating the viability of built environment sustainable regeneration projects (Edum-Fotwe and Price, 2009). It has also been seen as a crucial aspect that has formed part of the political discourse and agenda of many government agencies and institution's policy systems (Colantonio, 2007). According to Edum-Fotwe and Price 2009: 314), the social dimension of sustainability echoes the societal realities which are created through the "dynamic interaction of individual values and notions for any particular society". A prerequisite to social sustainability requirements is the way and manner people and communities live together and set out to achieve their individual and collective developmental goals (Colantonio, 2008).

In more practical terms, social sustainability refers to peoples' values and the empowerment in a manner that effectively engages them on a long term basis in activities that have impacts on their social aspirations and liveability (Colantonio, 2007). These principles underpin the social sustainability requirements and seek to provide collaboration between individuals' social progress and economic prosperity, which are in-tune with sustainable regeneration goals. These unique sustainability principles form part of the broader agenda of the built environment practices. Social sustainability rests on the assumption that the provision of social services in the form of capacity building, such as education and skills development and ensuring equality and participation of society, will automatically help to enhance the quality of life for such a society (Colantonio, 2008). As social requirements are crucial in developing and building a vibrant society, it is therefore imperative that the requirements for such social issues are clearly set out, to drive the social values, processes and systems towards achieving their intended objectives. It is argued that, for any community to meet its social aspirations, it is important that the residents living in such a community have access to social services and facilities (Littig and Griebler, 2005). In this regard the built environment has been recognised as the one with the potential and expertise to drive that process. Such linkages between the delivery of social sustainability benefits and the built environment have long been acknowledged by many authors (Ela Palmer Heritage, (EPH), 2008).

It is widely argued that among the sustainability factors, the social elements are the most ignored (Littig and Griebler, 2005) and the most difficult to deal with in terms of composition, implication and evaluation, notably because of the multifaceted and dynamic nature of society and its requirements. This presents a major challenge which makes it very difficult to specify and prioritise the social sustainability requirements in a more explicit manner (Edum-Fotwe and Price, 2009). Although the social sustainability aspect has been well acknowledged by many government agencies and construction industry practitioners, its core components still remain undefined (Littig and Griebler, 2005). The reality is that, to date, a well-defined theoretical concept regarding social sustainability requirements are still absent (Littig and Griebler, 2005). The social ontology framework developed by Edum-Fotwe and Price (2009), advocated the need for the identification and prioritisation of the specific social sustainability requirements existing within communities, to allow for effective monitoring and evaluation. Without such a well-defined framework, assigning priorities to social processes and planning systems may seem very difficult, if not impossible to achieve in practice (Littig, and Griebler, 2005). The lack of consensus of the main composition of social sustainability requirements has resulted in the misinterpretation and misapplication of its criteria by many industry practitioners and policy makers (Colantonio, 2008). It is argued that social sustainability policy systems and interventions targeted at particular communities have been too ambitious, making such policies very difficult to implement in practice (Hofstad, 2012). This, Hofstad (2012) said, has been the case when such policies were designed to achieve political objectives. Many such social sustainability concepts have remained implicit and in some cases have been 'concealed behind a seemingly random choice of common socio-political indicators' (Littig and Griebler, 2005: 68).

However, a more practical approach to social sustainability issues will require that the practitioners and the entire built environment adopt a more holistic approach towards the integration of tangible and non-tangible measures, which Colantonio (2008) referred to as soft and hard requirements. Such an approach calls for the construction industry to provide a range of social sustainability services, such as apprenticeship and skill training opportunities both in the form of a resource and also as a resource in itself, as an industry (Nwokoro and Onukwube 2011; Carpenter, 2011; Pitt *et al.*, 2009; EPH, 2008; Colantonio, 2008; 2007; CLG, 2007; Hill and Bowen, 1997). The creation of opportunities to meet individual needs is also seen as a prerequisite and a major driving force behind the formation of a productive and healthy society (Littig and Griebler, 2005). The provision of social facilities such as

affordable housing (Abidin, *et al.*, 2013; CLG, 2010; 2008; 2007; Bailey, 2010; Winston, 2009; Smith, 2006) and improvement of physical outlook (SERCS, 2011; CLG, 2010; 2008; HM Treasury, 2008), are crucial sustainability requirements required to attain a socially viable community and also attract local investment. Evidence has shown that the absence of such opportunities can lead to the deprivation and worklessnes of residents in the communities, which can adversely affect the residents' overall life quality and chances of them living within such communities (EPH, 2008). EPH went on to indicate that individuals with less education and training opportunities and facilities were more likely to face problems of low self-esteem and aspirations which as a consequence, can result in lack of social and economic power for these people.

A study undertaken by Littig and Griebler (2005) identified three major categories of factors for prioritising and evaluating the social aspects of sustainability. Factors such as security and wellbeing and achievement of societal basic needs were identified in their first order group of factors. In a wider sense, education and training, affordable housing, and health and safety issues were closely linked to the first order set of factors. Social justice and social participation were identified as the second and third order factors respectively. Since the built environment is a major provider of social facilities and services on which society depends, it is therefore fair to draw a parallel between the social sustainability factors identified by Littig and Griebler (2005) and the built environment. For instance, the construction of a new hospital facility will require services in the form of active participation (Zheng *et al.*, 2014; Häkkinen and Belloni, 2011; Pitt *et al.*, 2009; Colantonio, 2008; Littig and Griebler, 2005) of the residents in the community to seek their views and wellbeing, while at the same time providing apprenticeships and ensuring the health and safety of the workforce and the local residents (Reyes *et al.*, 2014; Akadiri *et al.*, 2012; Nwokoro and Onukwube, 2011; Martinuzzi *et al.*, 2011). In this sense, there is a strong theoretical and practical relationship and also a direct and indirect correlation between the social requirements and the built environment facilities and services. The social-related principles of a sustainable built environment require that regeneration practitioners deliver the built facilities and services in a manner that (DBIS, 2013; DEFRA, 2005; SDC, 2003; Hill and Bowen, 1997):

- Provides for and improves the quality of human life and wellbeing by ensuring adequate achievement of societal basic needs.
- Protects and promotes human health through a healthy and safe working environment.

- Provides empowerment through the development of skills training and capacity enhancement and participation in the projects.
- Provides reasonable delivery of the social-related benefits during the various stages of the projects.

Any attempt meant to address these social requirements will require a comprehensive approach from practitioners and the application of a suitable evaluation mechanism/framework. Such an approach should also involve the combination of both the qualitative and quantitative measurable targets of social-related factors, as well as consideration of the economic-related sustainability factors. Table 2.4 below shows the social sustainability factors of sustainable regeneration and the literature sources.

Table 2.4: Social sustainability principles of sustainable regeneration

Social sustainability factors of sustainable regeneration	**Literature source**
Health and safety for work force and local community /residents	Reyes *et al.*, 2014; DBIS, 2013; Akadiri *et al.*, 2012; Nwokoro and Onukwube, 2011; Martinuzzi *et al*, 2011; Littig and Griebler, 2005; DEFRA, 2005; SDC, 2003; Hill and Bowen, 1997
Education and training /apprenticeships opportunities	Clapham, 2014; DBIS, 2013; Nwokoro and Onukwube, 2011; Häkkinen and Belloni, 2011; Carpenter, 2011; Pitt *et al.*, 2009; Colantonio, 2008; 2007; EPH, 2008; CLG, 2007; Littig and Griebler, 2005; Hill and Bowen, 1997
Affordable housing	Clapham, 2014; Abidin, *et al.*, 2013; Bailey, 2010; CLG, 2010; 2008; 2007; Winston, 2009; Smith, 2006; Littig and Griebler, 2005
Stakeholders participation (including local community)	Zheng *et al.*, 2014; Häkkinen and Belloni, 2011; Pitt *et al.*, 2009; Colantonio, 2008; Littig and Griebler, 2005
Community security/wellbeing	Clapham, 2014; Häkkinen and Belloni, 2011; Littig and Griebler, 2005; DEFRA, 2005; SDC, 2003; Hill and Bowen, 1997
Physical appearance / positive image of local environment	SERCS, 2011; CLG, 2010; 2008; HM Treasury, 2008

2.14 Economic Sustainability Principles of Sustainable Regeneration

One major constraint confronting the sustainable development and regeneration agenda is the way and manner development projects can be undertaken to maintain a reasonable balance between peoples' economic aspirations and their sustainable development priorities (Mezher, 2011). The reality of such challenges has enabled the proliferation of many initiatives and policy frameworks in an attempt to address such challenges in a way that achieves peoples' sustainable development priorities in a more desirable and economic manner (ODPM, 2006). Primarily, the consideration and achievement of sustainable regeneration objectives are defined through the use of such policy systems. The UK government policy framework on sustainable development, for instance, has acknowledged the importance of sustainability requirements, and in particular, the economic dimension, as an important driver for the attainment of a sustainable economic transformation of communities. Seen as a pre-requirement for the attainment of desirable economic growth and economic sustainability of individuals and communities, the policy framework identified three key drivers as (OGC, 2011; CLG, 2010; HM Treasury, 2007):

- The promotion of macro and micro economic stability which provides opportunities for people, corporate bodies, and local community organisations to attain their economic potentials.

- The promotion of economic strategies which are targeted at meeting individuals and local community growth and needs; and

- The need to ensure and promote effective economic strategies which deliver a return on investment, value for money and sustainable jobs and productivity at all levels of society.

Consequently, such economic sustainability drivers are largely considered as key components of economic regeneration and are also consistent with the sustainable regeneration principles (Giles, 2008). It is generally suggested that meeting such economic sustainability drivers forms a crucial part of achieving the economic regeneration of communities (HM Treasury, 2007). According to Roseland (2000), delivering sustainable regeneration to meet individuals' economic sustainability aspirations implies, placing more emphasis on the economic empowerment of individuals and the society as a whole. Similarly, placing emphasis on

promoting economic sustainability must be seen as an important aspect of economic regeneration and a long-term goal to ensure economic growth and transformation of society, particularly in developing and deprived communities (CLG, 2008; ESC, 2006; Hill and Bowel, 1997).

The potential for regeneration projects to generate economic benefits for the under-privileged in society and deprived communities has long been recognised by many contributors of regeneration discourse (White, 2009; Treasury, 2007). From a sustainable development perspective, sustainable regeneration represents the realignment of society's economic aspirations with the processes of life (Mang and Reed, 2012). Seeking to optimise the economic productivity of regeneration projects is fundamental in the sense that issues that relate to economic sustainability have far reaching implications on individuals' general economic survival. The literature on regeneration provides a number of concepts that support the argument that enhancing the productive aspects of societies has the potential to impact on their overall economic fortune (ODPM, 2006). It is noted that many of the sustainability benefits resulting from regeneration schemes can be translated and simplified in economic terms (HM Treasury, 2007). Notable examples are additional employment, return on investment, and inward investment opportunities as well as the value for money benefits that sustainable regeneration projects provide for practitioners and their entire stakeholders (DBIS, 2013; Akadiri *et al.,* 2012; Häkkinen and Belloni, 2011; CLG, 2010; 2008). The promotion of employment and investment opportunities, coupled with the enhancement of skills are considered crucial benefits, regeneration projects are meant to deliver (OGC, 2011). It is generally believed that delivering such added value with a regeneration initiative will enable communities to respond favourably to economic transformation and effectively tackle issues of deprivation (HM Treasury, 2007). According to Littig and Griebler (2005: 73), focusing on the overall economic transformation of communities "needs to be taken into account; not just with regard to securing people's incomes, but also with regard to the psycho-social functions of gainful employment".

Accordingly, achieving economic transformations of communities largely depends on the ability of all stakeholders to facilitate the creation of employment opportunities, as well as the development of human resources to boost economic productivity for such communities (Marais and Botes, 2007; HM Treasury, 2007; Madlener, *et al.,* 2003; Green, 2001). Promoting local community organisations and enterprises and economic growth of local

communities also provides the opportunity to deliver economic sustainability benefits for local communities (CLG, 2008; HM Treasury, 2007; Madlener, *et al.*, 2003). In this respect, the built environment can be recognised as the potential sector in which substantial economic regeneration activities and opportunities can be delivered (Van Bueren and de Jong, 2007). Successful delivery of economic regeneration ultimately depends on promoting employment opportunities, and attracting and retaining the required investment in communities (HM Treasury, 2007). According to HM Treasury (2007) and Hill and Bowen (1997), the promotion of economic sustainability related to sustainable construction requires that practitioners seek to promote the creation of sustainable jobs and other income generating activities for the communities and also encourages economic competitiveness by adopting and implementing practices and policies that promote the economic sustainability of individuals. The fulfilment of this fundamental set of actions and requirements CLG (2010) and Roseland (2000) believed could potentially yield regeneration benefits considered as an essential component of building an economically vibrant society. Promoting a successful delivery of economic regeneration Madlener *et al*, (2003) believes will also deliver further economic additionality and enhance the local market and economy.

However, one major barrier affecting the delivery of successful economic regeneration is the lack of a structured framework and common definition of economic sustainability features (Häkkinen & Belloni, 2011). Although some attempts have been made to identify the economic sustainability attributes, it can be seen that much pragmatic work still remains to be done. While the economic sustainability aspect has received considerable attention within the construction industry, it is believed that very little attention has been given to the understanding of its impacts in relation to regeneration projects. According to Mang and Reed (2012), numerous difficulties still confront the widespread adoption and implementation of the long-term economic sustainability factors of regeneration, which are applicable to local conditions. Many such challenges arise from the issues that are intended to facilitate economic regeneration and provide a wide range of economic benefits to the concerned communities (HM Treasury, 2007). According to Madlener *et al*, (2003), well-defined frameworks to evaluate sustainability measurable parameters throughout the life cycle project are still lacking. The absence of quantitative and qualitative empirical evidence on the economic sustainability benefits of regeneration is also identified as one of the reasons behind its poor adoption and implementation by many practitioners (Häkkinen and Belloni, 2011). It is suggested that, it is only when such challenges are given adequate consideration and made

clear that a complete evaluation of the actual economic sustainability benefits of sustainable regeneration can fully be ascertained (ODPM, 2006). It is also suggested that economic regeneration is more likely to be successful when all the stakeholders including corporate entities and the beneficiary communities, are well engaged and committed to promoting its values (Häkkinen & Belloni, 2011). According to OGC, (2011), the realisation of successful economic regeneration objectives relies on the effective engagement of all key parties for any regeneration project to achieve its desirable goals. In business terms, economic sustainability is often regarded as a hindrance, because corporate entities depend on profit making for their survival and growth (Standing and Jackson, 2007). The perception of a higher cost of investment with lower investment returns for sustainability related issues, are often cited as major barriers for the adoption and implementation of sustainability requirements (Häkkinen and Belloni, 2011). However, for any organisation to align economic sustainability issues with its business and profit making objectives, such organisations must view sustainability as an opportunity and 'condition of doing business rather than a constraint' (Standing and Jackson, 2007: 168). Fortunately, there is a 'competitive advantage' for such corporate entities and practitioners who are genuinely embracing and pursuing the economic regeneration agenda (De Francesco and Levy, 2008: 23). White (2009) indicated that incorporating economic sustainability requirements into the business ethos and practices presents an enormous responsibility and opportunity for many organisations to continue to do successful and responsible business. Such linkages between corporate social responsibility and community development have been recognised as the main driving force behind the adoption of sustainability factors. For example, the creation of locally-based jobs is likely to economically empower a community, while meeting the organisation's corporate social responsibility objective. Accordingly, in recognising the potential benefits of sustainability, it is suggested that incorporating the social and economic sustainability aspects into regeneration projects is more likely to yield desirable regeneration outcomes. Consequently, such an approach must be seen 'as part of pursuing best practice' by the built environment practitioners (De Francesco and Levy, 2008: 23). The economic sustainability factors of sustainable regeneration and literature sources are shown in Table 2.5. Also Figure 2.3 below illustrates the concept of socio-economic regeneration.

Table 2.5: Economic sustainability factors of sustainable regeneration

Economic sustainability factors of sustainable regeneration	**Literature source**
Value for money	DBIS, 2013; Häkkinen & Belloni, 2011; OGC, 2011; CLG, 2010; HM Treasury, 2007
Profitability for investors/developer (Return on investment)	Häkkinen & Belloni, 2011; CLG, 2010; HM Treasury, 2007; Standing and Jackson, 2007
Employment opportunities	Clapham, 2014; DBIS, 2013; Akadiri *et al.*, 2012; Häkkinen & Belloni, 2011; OGC, 2011; CLG, 2010; 2008; HM Treasury, 2007; Marais and Botes, 2007; Littig and Griebler, 2005; Madlener, *et al.*, 2003; Green, 2001; Hill and Bowen, 1997
Local/area economic growth	Clapham, 2014; CLG, 2008; HM Treasury, 2007; ESC, 2006; Madlener, *et al.*, 2003; Hill and Bowen, 1997
Local community enterprises/organisations	Clapham, 2014; OGC, 2011; CLG, 2010; HM Treasury, 2007 Madlener, *et al.*, 2003

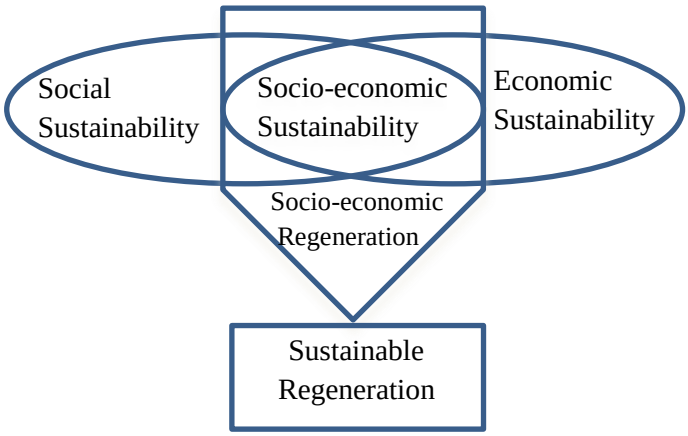

Figure 2.3: The concept of socio-economic regeneration.

2.15 Evaluation and Evaluation Processes

Jack and Breeze's (2008: 10) seminal work for *Centre for Local Economic Strategies* defined evaluation as 'a process of measuring or assessing the success of a project or programme'. According to McQuaid *et al.* (2006: 9), evaluation provides the means by which one can examine 'the components of a strategy as well as the strategy in total'. The primary rationale for conducting evaluation for sustainability projects is about learning the lessons necessary to inform the delivery of future sustainability projects (HM Treasury, 2011). Evaluation can be carried out on a 'project, programme or policy, particular aspects of the activity, or of key common issues affecting a number of activities' (HM Treasury, 2011: 46). Evaluation usually becomes a very useful and important mechanism particularly when it is 'used as a forward

planning tool in order to inform future project activities and enable a sharing of good practice between projects' (Jack and Breeze, 2008: 12), even though it can also be used as a backward evaluation mechanism (DTI, 2006). However, it is suggested that conducting an evaluation from pre-construction through to post-construction of a regeneration project will enable the evaluation process to evaluate a wide range of issues (Evans, 2005).

There are two main types of evaluation approaches which can be used to evaluate a project at pre-post construction, namely; summative and formative evaluations (HM Treasury, 2011; Jack and Breeze, 2008; McQuaid *et al,* 2006). The summative evaluation adopts a retrospective evaluation view of the project's achievements while the formative evaluation on the other hand, is carried out at the onset of a project (DTI, 2006). It is also used 'to amplify strengths and address weaknesses in the project/programme being evaluated as it is being delivered' (Jack and Breeze, 2008: 10). Although several authors have acknowledged the importance of undertaking evaluation at the early stages of the projects (Smith and Jagger, 2007; Lee, 2006), it is however, argued that making use of both evaluation approaches will help to eliminate duplications (McQuaid *et al,* 2006), and generate better understanding and outcomes.

One major characteristic of conducting good evaluation work, whether they are of formative or summative in nature, is about the process it employs to perform the evaluation work. It is widely argued that a good evaluation should not only focus on the achievement of the projects' objectives, but also consider the processes it undertakes to achieve those objectives. The need to ensure that evaluation work is underpinned by systematic and standardised processes was also acknowledged by authors like HM Treasury, (2011); Jack and Breeze, (2008); and DTI, (2006). They argued that there are some key reasons and potential benefits for following such a standardised and systematic evaluation process. These include:

- Ascertaining the performance of a project.
- Establishing learning about why a project works or is not working.
- Providing evidence for future policy, learning and funding interventions.
- Providing good practice examples and
- Demonstrating the contribution to key targets and outcomes.

It is further suggested that adopting a process-oriented evaluation framework is not about prescribing a rigid process to evaluation but is about providing an indicative and robust process for practitioners who are seeking to undertake high standards of evaluation work of their projects (CLG, 2009). Recognising such underlying issues provides a major step towards developing a robust evaluation framework through which a systematic evaluation process can be followed to evaluate a wide range of socio-economic sustainability impacts of regeneration projects. Hence, it is suggested that the effectiveness of an evaluation framework will be severely hindered when the processes that form the basis of the evaluation work are inappropriately and inadequately developed and specified (DTI, 2006).

2.16 Development of Evaluation Process

Attempts to undertake evaluation of sustainable regeneration projects has led to the development of many different forms of evaluation frameworks. One such has been developed by HM Treasury (2011), the 'Green Book', which consists of six main stages, and has sought to combine evaluation and appraisal techniques within the framework. It particularly emphasised that evaluation should be combined and conducted alongside the appraisal technique. Conversely, a major limitation that can be ascribed to this type of evaluation framework concerns the 'combination approach' adopted by the framework. Although both techniques may appear to be similar in theoretical terms, in practical terms they adopt different assessment processes to achieve their objectives. It is highlighted that the important thing for any good evaluation framework is about how it operationalises its evaluation activities through the evaluation process (DTI, 2006). A good evaluation framework should be grounded on a sound evaluation process. In a study conducted by McQuaid *et al.* (2006), it was reported that all the practitioners (stakeholders) who participated in the study unanimously emphasised the need for a systematic evaluation process that was capable of evaluating the impacts of sustainable regeneration on their communities. Practitioners were also of the view that a simplified process and an easy to use evaluation framework were very critical towards the successful evaluations of their future regeneration projects.

According to Jack and Breeze (2008), in order to undertake any meaningful evaluation of a sustainable regeneration project, it is crucial to develop an evaluation framework that specifies the processes that are required to be followed, as this will enable a systematic evaluation of the factors concerned. Doing so offers a useful starting point for 'promoting a

consistent approach to evaluation through: standardised survey, interview, and 'soft' outcome measurement tools' (McQuaid *et al,* 2006: 3). The evaluation processes outlined in the evaluation framework developed by Jack and Breeze (2008), identified four main stages as illustrated in Table 2.6. It highlighted the type of information that is required at each stage of the evaluation process. They indicated that the application of such evaluation frameworks was necessary to enable a common evaluation process to be followed and meaningful evaluation of the outcomes to be arrived at. Key findings that emerged from McQuaid *et al.'s* (2006) work also suggested that evaluation frameworks for regeneration projects should establish common evaluation guidance on identifiable baseline and outcome indicators, particularly at or before the commencement of the projects. The information identified/indicated (Jack and Breeze, 2008) in the evaluation processes (stages) of the framework, which is adapted for the present study, is outlined in Table 2.6 below.

The main rationale for adapting Jack and Breeze, (2008) evaluation process is due to the fact that its research methodological approach adopted (qualitative and quantitative) agrees with the research methodological approach adopted to evaluate the issues for this present study. Similarly, since the aforementioned evaluation process is focused on evaluation of sustainability factors, and also found to be different from other evaluation process, such as the one developed by HM Treasury (2011) which sought to combine evaluation process with appraisal process, it was deem appropriate for adaption for this study. It should be noted that the present study is focused on developing a framework to evaluate the socio-economic sustainability benefits of sustainable regeneration projects. According to CLG (2009: 5), the important thing when developing an evaluation framework "is to be clear what the research priorities are, and to adapt the content accordingly".

Table 2.6: Evaluation processes

Stage 1 ⇨	Stage 2 ⇨	Stage 3 ⇨	Stage 4
Getting started	Measuring impact	Collecting and analysing the data	Reporting and disseminating
Gathering background information, which describes the project	Identifying the types of project indicators and outcomes upon which to base your evaluation	Collecting and collating qualitative and quantitative data about the project and analysing the results	Writing and disseminating the evaluation report

Source: Jack and Breeze, (2008)

The main objective of stage 1, (getting started) of their evaluation process is concerned with gathering the initial and necessary information about the project. It also involved ascertaining

what the evaluation is intending to achieve. Establishing the baseline information at the early stages is also acknowledged as an important aspect of the evaluation process (McQuaid *et al*, 2006). Some of the key information required at this stage of the evaluation process includes; the consideration of the local context, target groups, the project duration and location, funding, management and staffing. The information gathered here allows the process to proceed to stage 2 of the evaluation process (measuring impact).

At stage 2 (measuring impact) of their evaluation process, the main objective is to decide the indicators/factors upon which the evaluation is based. It is also said that evaluation frameworks generally depend on strong performance indicators/factors (Zheng *et al.*, 2014; Rogers and Slowinski, 2004). Here, consideration is given to the time requirement of the evaluation. The decisions about the evaluation priorities and what needs to be achieved in terms of output are also made at this stage of the process. Some of these priorities include; financial priorities, project management and sustainability outputs of the project.

Stage 3 of their evaluation process involves the collection and analysis of both qualitative data and quantitative data. This is followed after establishing a good understanding of the issues the evaluation should thoroughly consider and examine. It employs two main types of data collection approaches which are based on the two research methods; i.e. qualitative and quantitative. The data obtained through the application of these research methods is analysed either manually or using NVivo – a qualitative data analysis package for qualitative data and SPSS - quantitative data analysis software in the case of quantitative data. Using both research methods to evaluate the soft and hard sustainability factors is also recommended by CLG (2009) and McQuaid *et al*, (2006).

Stage 4 - reporting and disseminating, which is the final stage of their evaluation process, involves writing up of the findings to ensure that a lasting record is provided of the evaluation work that has been carried out throughout the evaluation processes (stages 1 - 3). Ensuring a clear and logical format of presenting the findings from an evaluation work is also echoed by HM Treasury (2011) and McQuaid *et al* (2006). At this stage of the evaluation process, it is highly recommended that the findings are recorded as soon as all the data has been collected and the analysis is carried out to enable the right findings to be accurately recorded and reported in a clear format.

2.17 Summary

The Chapter presented the literature review on sustainable development, sustainable regeneration and evaluation and evaluation processes. It started by reviewing literature on the concept of sustainable development and its implication for the built environment. The specific areas it considered included sustainable construction and sustainable development policies and practices, and the nature of the current institutional and governance systems. The review of the literature also looked at how the construction industry has articulated and applied the sustainability concept to deliver construction projects, and highlighted the importance of sustainability, particularly for the construction industry in the UK. It then went on to review the literature on the sustainable regeneration concept and how it evolved, and also highlighted its linkages with the sustainable development objectives. It looked at the main drivers and barriers that were influencing the construction industry organisations and practitioners in adopting and implementing sustainability, and in particular the social and economic ones on their projects. The final part reviewed the literature on the evaluation processes. The next Chapter provides the research methodologies and the various methods and processes adopted to collect and analyse data in support of the literature.

CHAPTER 3 RESEARCH METHODOLOGY

3.1 Introduction

The purpose of this Chapter is to outline the research philosophy, the methodology and the research approach to be followed in order to achieve the aim and objectives of the study. It presents a detailed account of the research philosophy, the pragmatic research approach, and the research methodology, mixed method approach and the two main data collection techniques; semi-structured interviews and a questionnaire survey adopted for this study. It highlights the main advantages and disadvantages, and the strengths and weaknesses of the two research methodologies; qualitative and quantitative, and the two data collection techniques; semi-structured interviews and a questionnaire survey, and provides the rationale for adopting them for the study. Also, it provides the research approach followed to collect the qualitative data from 21 key practitioners for the qualitative phase of the study. It also explains the approach undertaken to collect the quantitative data, using a questionnaire survey, from 193 practitioners who participated in the quantitative phase of the study, and presents the results obtained from the questionnaire survey. The conceptual framework development approach adopted is also highlighted. The Chapter further reports the results of the normal distribution test conducted on the quantitative questionnaire survey data, which forms the basis for the choice of a non-parametric test for the study. The results of the reliability test conducted on the questionnaire survey are also provided. Finally, the Chapter outlines the processes, procedures and the methods of analysis adopted for the qualitative and quantitative phase of the study.

3.2 Research Philosophy

Burke (2007: 476) defined research philosophy "as the questioning of basic fundamental concepts and the need to embrace a meaningful understanding of a particular field". She pointed out that the pursuit of such a philosophical perspective provides a useful starting point, as it allows the research approach to be clearly communicated in a context that is well understood by others. At the heart of any good research are the philosophical assumptions that ultimately drive the "logic of mapping" and the action of investigation, which "engages us in the interpretation of texts and the criticisms of common wisdoms that are often taken for granted" (Ruona and Lynham 2004: 158). The exploration of philosophical perspectives is a crucial aspect in unearthing researcher's philosophical undertone, which ultimately helps to clarify the research approach, leading to the development of an appropriate and suitable research methodology, as well as the method of analysis. Similarly, it plays a key role in

influencing and directing the way knowledge and meaning in a particular field can best be captured and interpreted (Burke, 2007). Saunders *et al.* (2009) suggested that the philosophical propositions made by a researcher through the selection of a research strategy have a considerable impact, not only on what the researcher does, but how they understand what it is that is being investigated. Indeed, philosophically informed research plays a significant role, as shared beliefs and also forms the basis for the selection of the research paradigm, the data collection strategy and method of analysis (Morgan, 2007). Moreover, the philosophical assumptions that underline a selected paradigm for a study of a particular phenomenon will enable the researcher to be aware of the boundaries within which to approach the investigation. Accordingly, understanding philosophical assumptions of a research area provides the necessary knowledge for the researcher to situate the research strategy within a suitable research paradigm in relation to the researcher's belief systems (Burke, 2007).

Seeking to gain an understanding of what is perceived as valid knowledge, requires the exploration of such philosophical assumptions as the essential aspects of the research process, to ensure that the research is conducted with rigour and with credibility (Burke (2007). However, achieving such objectives requires that the research is established within a suitable paradigm, with well stated philosophical assumptions relevant to that research paradigm (Burke, 2007). Knowledge is seen as a crucial facet of inquiring about multifaceted issues. For that reason, the pursuance of such knowledge must be well grounded in a well-defined philosophical approach (Ardalan, 2009). Brennan *et al.* (2011) viewed the creation of knowledge as prerequisite of social science research which can only be achieved through a solid understanding and application of a philosophical foundation of inquiry. Saunders *et al.* (2009) identified a linkage between philosophical assumptions and the creation of knowledge in relation to a research approach (Saunders *et al.*, 2009). According to Adcroft and Willis (2008), the philosophical assumptions whether implicitly or explicitly expressed, provide the logical starting point for management research, with a significant influence on the approach and the purpose of the research. Brennan *et al.* (2011: 103) believed that "any approach to knowledge inquiry rests upon certain foundational assumptions and presuppositions, about the nature of reality, about the nature of possible forms of knowledge about that reality, about the types of methods which can be used to generate that knowledge, and several others". It is argued that different research paradigms lend themselves to different forms of assumptions and propositions to knowledge investigation, and these assumptions and propositions tend to

identify with specific philosophical components, appropriate to such research paradigms (Brennan, *et al.*, 2011). According to Brennan, *et al.* (2011: 103), such an "approach to knowledge inquiry (or paradigm) inspires certain commitments and assumptions, which are inherent in the paradigm - including ontological, epistemological, and methodological" aspects of research philosophy. Thus, the epistemological aspect provides the linkage between practical and theoretical knowledge, which is supported by ontological and axiological considerations, as fundamental facets of research (Carter and Little, 2007). These considerations dictate how researchers view and conceptualise reality (ontology), knowledge generation (epistemology) and deal with ethical issues (axiology); which provide a guiding framework for the consideration of methodology, as well as the method of analysis. These philosophical assumptions, Brennan *et al.* (2011: 107) believe, are "contingent on both the inputs to the research as well as the procedures undertaken within the research process itself, for any research to be considered valid and reliable".

Guba and Lincoln (1988), in their earlier work, identified four philosophical components of a research paradigm (positivist and interpretivist) in terms of epistemology (how we know what we know), ontology (the nature of reality), axiology (the place of values in research), and methodology (the process of research). According to Ruona and Lynham (2004), philosophically grounded research lends itself to the interaction of three components as: epistemology (which makes claims about the nature of knowledge), ontology which is concerned with the fundamental assumptions about the nature of reality, and axiology (which is concerned with the ethical issues that guide the research). Denzin and Lincoln (2005) suggested that the philosophical assumptions and the set of belief systems that guide research action, which also reflects the researcher's worldview and perceptions, is composed of four sets of philosophical assumptions: epistemology (knowledge), ontology (reality), axiology (ethics or morality), and methodology (inquiry). Such "belief systems justified both the pursuit of different kinds of research questions and the use of different kinds of methods to answer those questions" (Morgan, 2007: 59). Carter and Little (2007) agreed to the above position by adding that making a good philosophical assumption is crucial to the research outcome, since it influences the selection of the research methodology and the method of analysis. In that sense, a careful selection of the research philosophy, methodology and method will enable researchers to provide answers to their questions and also meet their research objectives (Carter and Little, 2007).

Hence, for this study the philosophical stance (dominant) taken by the author to explore the real life situation based on practitioners' experience and knowledge, as illustrated in Figure 3.1, for the ontology is interpretivism; while the epistemology is subjectivity. For the axiology, it assumes a value laden stance, while the methodology adopted is the combination of qualitative and quantitative (mixed method) approaches, as shown by the red dotted circled lines in Figure 3.1.

With regard to mixed methods research, making such philosophical assumptions is of paramount importance to the selection of the research approach that transcends the epistemological and ontological barriers by combining both inductive and deductive research paradigms. Alongside these philosophical inferences, the researcher is able to select the research methodology and method of data analysis which is consistent with the research paradigm. Morgan (2007) intimated that a strong appreciation and application of such inferences is crucial in creating the appropriate reality of knowledge, relevant to the research paradigm that rests on the utilisation of the mixed research method approach. The distinctive characteristics of mixed research methods are clearly defined by the linkages/cooperation between the philosophical inferences and the research paradigm.

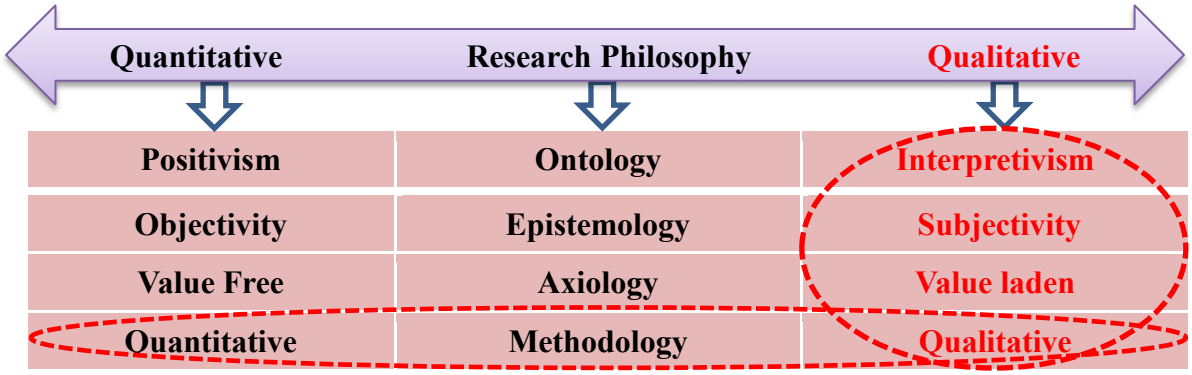

Figure 3.1: Summary of the philosophical stance for the study
Source: adapted from Saunders *et al*, 2009.

3.3 Pragmatism Approach

Pragmatism has been acknowledged as the most appropriate paradigm for investigating phenomena consisting of numerical and non-numerical variables (Kral *et al.*, 2012). As a paradigm, it is seen as the best fit, most suitable for conducting research into complex human activities, by employing both the qualitative and quantitative research paradigms. Fundamentally, it exemplifies two distinct research methodologies and ideologies: qualitative-interpretivism and quantitative-positivism research methodologies. Pragmatism seeks to capture inferences provided by both qualitative and quantitative methodologies into a single

research framework to explore issues, particularly where they are of multifaceted nature (Fidel, 2008). The central characteristic of a pragmatic approach is that the researcher can take both the positivist and interpretivist positions. Thus the research approach embraces both textual and measurable languages, which the researcher utilises to investigate and understand the social issues (Morgan, 2007). Central to the pragmatism philosophy is its ability to refute the paradigm war that has existed between the qualitative-interpretivism and quantitative-positivism positions, by drawing on their respective strengths (Masadeh, 2012). Such defining features of the pragmatic paradigm according to Morgan (2007), provide the foundation for researchers to undertake investigations with what is traditionally seen as incompatible and conflicting paradigms.

Pansiri (2005) indicated that the concept of pragmatism provides a useful middle ground for combining different types of research approaches into a single workable solution, where the emphasis is on practical research problems rather than using a particular research approach. Pragmatic paradigm positions research problems at centre of the investigation. Drawing on the core values of the pragmatic paradigm, Morgan (2007: 73) pointed out that it "offers an effective alternative through its emphasis on the abductive–intersubjective–transferable aspects of our research". Such values, according to Ardalan, (2009: 516), define the pragmatic research in which both quantitative and qualitative approaches "share common fundamental assumptions about the nature of social science and the nature of society". Ardalan (2009) went on to suggest that different research paradigms are established based on different propositions about the nature of the scientific and social world, with each of these paradigms generating their own assumptions and theories.

While quantitative and qualitative methodologies emphasized deductive–inductive knowledge of the social and scientific world, the pragmatic research paradigm on the other hand goes a step further by providing a middle ground – an abductive approach (Morgan, 2007) and by so doing, rejecting the barriers perceived to be between the traditional qualitative and quantitative methodologies (Masadeh, 2012). Although their respective usefulness can be seen in different research contexts, pragmatism is largely considered as the most appropriate and suitable research paradigm or philosophy that provides the best results for a mixed method approach (Tronvoll *et al.*, 2011). For instance, Ardalan (2009) argued that much benefit can be achieved through the effective corroboration between these qualitative and quantitative research methodologies. By adopting the pragmatic approach, it implies that the

researcher is oriented towards seeking a dialogue between two distinct research approaches in achieving some particular research objectives. It has generally been suggested that the combination of the subjective and objective research paradigms in a single study provides a greater opportunity to enhance and expand the understanding of a complex situation. In this respect, the use of the pragmatic research paradigm has been considered to be the best option. It is argued that in order to continue to advance such understanding especially for construction management related research, requires the adoption of research approach which offers the opportunity to obtain new knowledge and insight in a holistic manner. In that sense, the application of the pragmatic research paradigm provides relatively idealistic alternatives to the traditional single research approaches. Philosophically, the pragmatic research paradigm is aligned to the mixed methodology approach, drawing its strength from both the objective and subjective view point of knowledge generation. Johnson and Onwuegbuzie (2004) intimated that the essence of adopting the pragmatic research paradigm offers an explicitly knowledge-oriented and practical approach to inquiry. More importantly, pragmatic research focuses on knowledge generation through what Morgan (2007: 72) referred to as "joint actions", which can be achieved together by a different set of research approaches. Building on Morgan's view, Ardalan, (2009) noted that the pragmatic oriented approach aligns itself with the generation of knowledge and therefore fits well within the world of practice.

Based on its distinctive features, various authors have also aligned pragmatism as the "philosophical partner of mixed research" (Pansiri, 2005: 201). Because of its multi-dimensional inclinations, Klingner and Boardman (2011) indicated that the pragmatic research approach provides the best mechanism for researchers to answer inductive-based and deductive-based research questions all together in a single study. This, Saunders *et al.* (2009: 598) believe, makes the pragmatic paradigm idealistic alternatives "possible to work within both positivist and interpretivist positions". Mertens (2010) and Morgan (2007) suggested that the epistemological and ontological features inherent in the mixed method approach provide the philosophical basis and motivation for the choice of the pragmatic research paradigm. Accordingly, adopting such philosophical perspectives facilitates the creation of knowledge in a manner that is consistent with the mixed method research approach. Therefore, in view of the above, this study adopts a pragmatic research approach that utilizes both qualitative and quantitative methodologies, which is otherwise referred to as a mixed method, to investigate the research questions to meet the objectives of the research.

3.4 Mixed Method Approach

The mixed methods approach, in recent times, has increasingly been assuming prominence and acceptance as a feasible and viable alternative research method to the traditional single qualitative-quantitative research approach (Hanson *et al.,* 2005). A number of factors according to Creswell (2009), have accounted for its evolution and acceptance as a research method. The most common cited factors being complexity and diversity of contemporary research problems. Prior to its adoption and acceptance as a research method by many other disciplines, it has traditionally been utilised mainly in the fields of anthropology and sociology (Johnson *et al.,* 2007). Its emergence in the research arena had provided an alternative to the mono-methods, which were traditionally not responsive to the ever increasingly complex and multifaceted problems facing the social world. According to Creswell and Garrett (2008), the recent demand for a mixed method approach arises from concerns about the inability of the individual qualitative and quantitative research paradigms to offer workable solutions to ever more complex and dynamic problems confronting society and the scientific world.

Several definitions exist for mixed methods, one such definitions is by Johnson *et al.* (2007: 123) who defined mixed methods research as "the type of research in which a researcher or team of researchers combine elements of qualitative and quantitative research approaches (e.g., viewpoints, data collection, analysis, inference, techniques) for the broad purposes of breadth and depth of understanding and corroboration". The complexity and diversity inherent in its design and definition indicates that the mixed method technique has become critical and synonymous to good research practice. According to Greene (2008: 20), the mixed approach "offers deep and potentially inspirational and catalytic opportunities to meaningfully engage with the differences that matter in today's troubled world". Underlying these definitions is the recognition of its uniqueness and ability to offer multidimensional research solutions to humanistic and behavioural phenomena in a manner that one form of research method is not able to do. One significant proposition of the mixed method technique is the diversification of ideas it offers as a concept, coupled with its potential to broaden the understanding of human experiences in developing policies and practices (Tashakkori and Teddlie, 2010). Advancing the potential benefit argument, Green (2008) cited triangulation and complementarity as some of the major advantages, which are directly associated with the mixed methods research approach.

Also, seen as the third force or methodological paradigm by authors such as Combs and Onwuegbuzie (2010) and Tashakkori and Teddlie (2010), the approach draws its strength from the traditional qualitative-quantitative research methods and integrates them in a manner that helps to answer unique research questions pertaining to the scientific and social world, which otherwise cannot be answered by individual mono-research methods (Klingner and Boardman, 2011). One major advantage with the mixed method is its strong ties with research questions (Creswell and Garrett, 2008). According to Bryman (2006) and Hanson *et al.* (2005), the decision to adopt a mixed method approach must be based on a number of reasons, notable among them include the purpose of the study, the research questions, and the type of data required for the study. Underlying these reasons is the rationale behind the mixed method in providing the best platform to answer inductive-based and deductive-based research questions all together in a single study. It is believed that an effective utilisation of this principle will yield better outcomes than can be achieved using a single method approach for the study. For example, combining interviews with a questionnaire survey can help to tap more into participants' knowledge, yielding powerful insights for the study (Johnson and Onwuegbuzie, 2004). Equally, the principle behind the mixed method enables the researcher to collect data from multiple sources to investigate the hard and soft issues pertaining to human and organisational issues without compromising the scientific rigor of the findings (Masadeh, 2012). Saunders, *et al.* (2009) and Onwuegbuzie and Johnson (2006) suggested that by adopting qualitative and quantitative research methods within the same research framework, practical questions can be addressed simultaneously from different perspectives, leading to a greater confidence in the findings and conclusions. In addition, adopting a mixed position will enable the researcher to mix and match design elements in a way that provides the best opportunity of answering specific research questions.

However, the fundamental question is how such research approach can be designed to ensure that weaknesses from one research approach can be well complemented for by the strengths from the other research approach. In view of this, Onwuegbuzie and Johnson (2006) cautioned researchers adopting a mixed research approach to carefully examine the extent to which the weaknesses and strengths from both methods can be counterbalanced without compromising the validity of the findings. Given the distinctive characteristics between qualitative and quantitative methods, Newman and Hitchcock (2011) advised researchers to better focus more on the purpose of the research to drive the method in a manner that provides

a logical linkage between the two research methods. Table 3.1 shows the strengths and weaknesses of a mixed method research approach.

Philosophically, the mixed method generally draws from pragmatism philosophy (Onwuegbuzie and Johnson, 2006). The advantages of combining their perspective approaches in spite of the differences in their philosophical orientations have been acknowledged in the literature (Grix, 2004). Numerous questions have been raised about the fundamental issues relating to its philosophical orientations. Previous contributors have sought to argue that the philosophical barriers between the two methods, coupled with their contrasting views, made them incompatible to combine their perspectives. Moreover, the combination of the two perspectives, according to Onwuegbuzie and Johnson (2006: 59), has also been considered to be tenuous because of "competing dualisms: epistemological (e.g. objectivist vs. subjectivist), ontological (e.g. single reality vs. multiple realities), axiological (e.g. value free vs. value-bound), methodological (e.g. deductive logic vs. inductive logic), and rhetorical (e.g., formal vs. informal writing style) beliefs" they espouse. However, while the two research methods seem to be espousing different philosophical ideologies, nonetheless they tend to provide a research approach and philosophical dimension that seeks to bring together their perspectives into a workable solution (Johnson and Onwuegbuzie, 2004). It can be argued that both qualitative and quantitative research methodologies have common agreed criteria that transcend these differences and barriers (Bryman, 2006). In practical terms, there are seeming overlaps between them to some extent. This to a very large extent, plays down on the 'difference' argument perceived to be existing between them. For this reason, by de-emphasising their philosophical differences (Chen, 2006) and aiming solely at their potential benefits, the perceived differences between the two methodologies are to a large extent, relegated to the background.

The built environment researchers have long recognised the importance of using both qualitative and quantitative research methodologies for their studies. Mixed methods, as they are called, are assuming increasing popularity among construction management researchers. Panas and Pantouvakis (2010: 79) suggested that the mixed method concept "seems to be gaining ground, especially given the industry's change towards intensifying the exploration of productivity's soft aspects as well as behavioural and managerial factors and cultural diversions of the project actors". According to Amaratunga *et al.* (2002), mixed method has been seen as an emerging area of research, which has a number of advantages particularly

within the built environment. While the traditional characteristic of quantitative inquiry is based on deductive reasoning, statistical analysis and hypothesis testing, the traditional characteristics of qualitative inquiry on the other hand, is based on inductive reasoning and hypothesis generation. Given that construction processes are fundamentally complex with diverse players and rapid technological changes; and at the centre of the exploration of these processes and complexities are the crucial roles deductive and inductive reasoning play in ensuring the successful exploration of these issues. In this regard, the traditional individual research approach such as the quantitative or qualitative research method, no longer appears to be adequate and suitable in dealing with such complex issues. These defining characteristics inherent in mixed method research make its application suitable for this present study to explore the complex issues (both soft and hard) relating to sustainability and regeneration projects.

Evidence to date has suggested that the single method approach exclusively, has proved to be inadequate in exploring the issues, particularly where the issues are of multifaceted nature, such as those found in the construction industry where the interaction among processes and projects' participants is a key feature, often requiring a substantial amount of procedures. In those cases, investigating such complex interrelations and interactions will require amassing substantial evidence (Creswell and Garrett, 2008). Similarly, since construction activities are not discrete events but processes with different phases involving different types of activities predominating at different times, it therefore stands to reason that some particular research methods may be more useful for some activities than others. Apparently, the combination of the relative strengths from multiple perspectives has the potential to offer a more comprehensive and desirable outcome (Mingers, 2001). The application of such an approach will allow for both deductive and inductive reasoning, and better appreciation of a given situation "rather than a strictly positivistic or interpretivist slant to the data" (Harrison and Reilly, 2011: 22). As a discipline such as construction management, which primarily involves multidisciplinary teams with enormous research challenges, combining different data sets and strategies from multiple sources such as the quantitative and qualitative research methods will enhance the reliability and the practical significance of the findings.

Table 3.1: Strengths and weaknesses of mixed method approach

Strength	Weaknesses
Words, images, and description can be used to supplement meaning to figures and the vice versa.	Can be more expensive to conduct.
Stronger evidence can be provided through convergence and corroboration of findings.	Mixing two or more research paradigms can be difficult and problematic.
Can provide broader perspective to a range of research questions and issues.	Can be time consuming
Can offer deeper insights and understanding than the single approach method.	Can be difficult to analyse and draw inferences to interpret findings.
Can offer a more complete knowledge necessary to inform theory and practice.	Can generate a large volume of information/data.

Source: Adapted from Johnson and Onwuegbuzie (2004)

3.5 Quantitative Research Method

Quantitative research involves a systematic scientific investigation of quantitative phenomena and their relationships. The objective of quantitative research is to employ mathematical models to test theories and hypotheses pertaining to the natural world (Creswell, 2009; Fellows and Liu, 2003). It adopts an iterative process whereby evidence is evaluated, theories and hypotheses are redefined, and technical advances are made and so on. Seen as a distinctive research method, it consists of a collection of numerical data, often described as hard data (Fellows and Liu, 2003). Essentially, quantitative research traditionally involves the measurement of numbers from large amount of data gathered from various people across a large geographical area (Creswell and Garrett, 2008). Central to quantitative research is the process of measurement it adopts as it provides the fundamental connection between an empirical observation and mathematical expression of quantitative relationships (Petty *et al.*, 2012). The measurement of such phenomenon, according to Santos (2006: 290), helps to "explain the connections between variables by measuring cause-effect relationships". Similarly, quantitative research predominantly emphasises a deductive approach to data collection and analysis. According to Bryman (2008), quantitative research is useful where many emphases are placed on data collection and analysis involving:

- A deductive approach that establishes the relationship between theory and research, in which theory testing is the main priority of the study.

- The infusion of research practices and norms of the natural scientific framework, as well as a positivist approach.

- The views and opinions of social reality as an external and objective reality.

The quantitative researcher makes an ontological assumption that the social and the natural world is seen to be made of objective systems free of human systems and activities. The researcher in this regard assumes a value-free (axiology) position throughout the entire research process (Fellows and Liu, 2003). Embedded within this research approach is the perception that a social phenomenon is composed of objective systems which are independent of the activities being studied. For example, quantitative researchers most often make claims to the objectivity of their research findings, since their data collection approach is largely seen to be independent of their research participants. It is believed that separating the researcher from the participants helps to eliminate biases, leading to better and more reliable scientific outcomes (Johnson and Onwuegbuzie, 2004).

Many of such discussions in favour of quantitative research within the built environment have centered on such reliability, validity and the scientific principles considered as a major strength associated with this research methodology. It is further argued that the knowledge generation procedures adopted by quantitative studies are entirely different from those espoused by qualitative research (Petty *et al.,* 2012). Although the quantitative approach offers a useful idea on cost implications and mechanisms "considered to be systems of explicit rules and procedures" (Eldabi *et al.,* 2002: 64), it however does not explicitly provide answers to questions pertaining to social experiences (Klingner and Boardman, 2011). Since it relies heavily on measurable evidence, it is however considered to have very little control over the social factors. Again, while the approach can be utilised to measure such elements pertaining to construction management, their suitability in providing in-depth explanations to such complex social issues has been put into question (Amaratunga, *et al.,* 2002).

A further deficiency of quantitative studies lies in the assumption that human phenomena can be captured through a scientific and value-free approach. Such assumptions considerably makes it less capable of offering clearer and deeper fundamental meanings and explanations to human behavioural issues usually found in construction project management (Amaratunga, *et al.,* 2002). Moreover, the over reliance on questionnaires as its main data collection instrument hinders the interaction and the exploration of social issues in their natural settings (Bryman 2008). The lack of interaction and the distance position often adopted by this research approach constrains the researcher from articulating such feelings through the

research process. It is also argued that questionnaires are highly labour demanding for both the respondents and the researcher, and in most cases are characterised by low response rates as a consequence (Fellows and Liu, 2003). The closed-ended questions and restrictive nature of such instruments, limit the exploration of human factors in detail and this in Fellows and Liu's (2003) view, affects the reliability of the findings in drawing a decisive conclusion from the study. It is worth noting that while the scientific research approach can be employed to explore sustainability factors, their usefulness and suitability in explaining such factors relating to sustainable regeneration projects is very limited. It has been suggested that combining the two approaches: the quantitative and qualitative methodologies, is beneficial and helps to build a more complete picture of the natural and scientific world (Bryman, 2008). Therefore for this present study, both quantitative and qualitative methodologies are adopted to meet the objectives of the study.

3.6 Qualitative Research Method

Qualitative research on the other hand, involves the investigation of occurrences from the participants' view point. As it's central objective is pivoted on the understanding of the participants' opinions, behaviour and experiences, it is regarded as the most suitable way of exploring issues based on social phenomena (Burke, 2007). Based on its interactive approach to inquiry, it adopts a relatively open-ended data collection approach (Bryman, 2006). At the core of the qualitative method is the collection of primary data in a non-numerical form, which means that it does not rely on the number crunching approach to achieve its objectives. Unlike the quantitative research approach that relies heavily on measurement and mathematical models, qualitative research uses logical inductions to decipher data, usually involving few cases. Petty *et al.* (2012) intimated that the major advantages associated with the qualitative research approach include its capacity to produce more detailed explanations of human phenomena as well as in-depth analysis of complex human and cultural dynamics in a way that cannot be fully captured with a numerical measurement approach. A further strength identified by Harrison and Reilly (2011) is the depth of knowledge and understanding a researcher obtains through the exploration of such experiences from participants in their natural settings. Harrison and Reilly (2011) went on to suggest that such understanding and meaning attached to such human experiences are largely regarded as the hallmark of qualitative studies.

Accordingly, conducting qualitative research can be seen to be helpful in understanding the environment in which research participants act and the way in which the environment influences their behaviours. Plano Clark (2010) and Eldabi *et al.* (2002) suggested that the application of a qualitative approach presents advantages to viewing a phenomenon in its real social context, and by so doing offers a greater depth of understanding and flexibility to social matters. The data collection techniques it adopts to elicit rich information include; interviews, participant observations, documentations and focus groups (Pope *et al*., 2002) through its traditional use of case study, phenomenology and grounded theory methods. These have widely been applied within the construction industry to study many construction projects and practitioners involved in the delivery of the projects (Amaratunga *et al.,* 2002). Recent works by Amanda Smith (2010) and Lombardi *et al.* (2011) have employed a qualitative research approach to study sustainability aspects of regeneration, with credible and compelling outcomes. Therefore for the aforementioned reasons and evidence, a qualitative research approach is adopted to investigate the social or humanistic perspective of this study.

However, in spite of these numerous benefits, qualitative research has also been criticised for its limited size of data, leading to its inability to provide generalised results (Castro *et al.*, 2010). Such a limited and unrepresentative sample size approach has inhibited its capacity to draw definitive conclusions in obtaining decisive research outcomes (Saunders *et al.,* 2009; Castro *et al.,* 2010). Researchers carrying out qualitative studies have also been criticised for the unrestricted approach they often adopt to report their research findings. This, in effect, makes it susceptible to manipulation by many qualitative researchers and in the process, affects the integrity of the research findings (Johl *et al.,* 2012). Similarly, the lack of precision, coupled with the unscientific approach it adopts to data collection and analysis has also been reported as some of the weaknesses associated with qualitative studies. These shortcomings, according to Carter and Little (2007), have fundamentally undermined the validity and credibility of findings generated by qualitative studies. It is further argued that the close collaboration between the researchers and the participants tends to compromise the subjective position taken by qualitative researchers in exploring phenomena that are associated with sustainability. These aforementioned limitations associated with qualitative methods, make it very important for this present study to combine the relative strengths of the qualitative and quantitative research methodologies to study both the social and scientific perspectives associated with the delivery of sustainable regeneration projects. Table 3.2 below illustrates the strengths and weaknesses of qualitative and quantitative research methods.

Table 3.2: Strength and weakness of qualitative and quantitative research methods

Method	Strengths	Weaknesses
Qualitative	Able to understand people's meaning. Able to develop theory. Able to generate data in natural setting. Open data collection approach.	Difficult to control the pace, progress and end-point of research process. Can be time consuming. Data interpretation can be difficult. Limited (small) sample
Quantitative	Able to test hypothesis. Able to collect large sample. Findings can be generalized.	Methods used tend to be inflexible and artificial in nature. It is not able to effectively capture human phenomenon

Source: Adapted from Amaratunga *et al.,* (2002)

3.7 Data Collection Techniques

There are several techniques available for collecting data. However, the selection of a data collecting strategy may be determined by the consideration of the degree of information and the depth of accuracy and credibility of the findings required (Fellows and Liu, 2003). The collection of data for any research work, according to Fellows and Liu (2003: 105), is a "communication process" between the researcher and the respondents, which forms the basis for the exploration and understanding of the phenomenon under study. It is an interactive aspect of a research process, and when carried out properly, helps to ensure the validity of the research findings (Panas and Pantouvakis, 2010). A major determinant of the data collection technique is the nature and type of inquiry and information required about a particular setting or context (Naoum, 2007). The fundamental rationale for collecting data is to allow the researcher to gather enough evidence and consequently draw the inferences required to make important decisions about the findings (Tashakkori and Teddlie, 2010).

Different data collection techniques may be suitable to different research methodologies and inquiries (Pope *et al,* 2002). However, deciding on the type of data collection techniques to adopt will depend largely on the research methodology and the overall objectives of the study (Naoum, 2007; Fellows and Liu, 2003). Regardless of the method or methodology adopted for the study, the data collection techniques employed must be suitable and capable of meeting the objectives of the study. Moreover, it is important that the technique used in collecting data is adequate enough to provide the information required to accomplish the overall goals of the study. Therefore, in ensuring such fitness for purpose for a particular study, Naoum (2007)

suggested that data collection techniques such as personal interviews can be combined with a questionnaire survey to best understand participant's behaviour. Data collection techniques can also be used independently or in combination, depending on the circumstances and the researcher's own judgement, as to which technique(s) is best suitable to obtain the required data for the study (Saunders, *et al.,* 2009; Naoum, 2007). It is argued that data collected from multiple sources could complement each other to offer a more comprehensive picture for the study (Bazeley, 2006). For this reason, adopting multiple data collection techniques such as interviews, observation, a questionnaire survey and so on, provides the medium to collect both open and closed-ended data required to (Saunders, *et al.,* 2009) offer a better insight and a superior understanding of the issues being studied (Johl *et al.,* 2012). Additionally, it is expected that the outcomes of such multiple data collection approaches will yield more powerful research results than if it were just one data collection approach (Chen, 2006). Equally, the application of multiple data collection approaches would generally help to corroborate, complement and authenticate evidences obtained from other sources (Johnson *et al.,* 2007).

Although a distinction is commonly drawn between data collection techniques for qualitative and quantitative research methodologies, it has been argued that the techniques can be combined in practice. It is acknowledged that using qualitative and quantitative data sources can be complementary (Saunders, *et al.,* 2009). Using such an approach will enable researchers to triangulate their findings to provide more solid evidence and a better representation of the social world. For example, data collected through semi-structured interviews may be used to complement and triangulate findings obtained from questionnaire survey data. This is consistent with the mixed method approach. Consequently to explore the issues for this study, the data collection technique adopted is the combination of both interviews and a questionnaire survey. Castro *et al.* (2010: 345) pointed out that combining such data collection techniques will "offer enhanced explanatory power above and beyond the sole use of a qualitative or quantitative approach" and yield more accurate interpretation and understanding of sustainability factors in meeting the objectives of the study.

3.8 Questionnaire

A significant number of social science studies, including construction management involve acquiring information from the field through the use of questionnaire surveys, interviews, participant observations, etc., to fulfil their objectives. However, among these data collection

techniques, the questionnaire has been found to be the most prominent instrument used by many researchers to acquire such information for their studies (Fellows and Liu, 2003). According to Saunders *et al.* (2009) and Bryman, (2008), the questionnaire constitutes the most commonly used survey tool for eliciting data from a large geographical area for many research works, in comparison to the use of non-standardised data collection techniques. Due to its versatile characteristics, it is "more suited to assembling mass information at a minimum expense" and also within the shortest possible time (Naoum, 2007: 53). It is believed to be a more convenient and preferred choice because it provides the platform for speedy collection and analysis of research information within a limited period of time (Naoum, 2007).

Indeed, such a questionnaire survey technique has been extensively utilised to collect construction project related information for similar reasons (Fellows and Liu, 2003). A further advantage identified with the questionnaire technique is the unique flexibility it offers to respondents to respond to the questions at their own convenient time, especially when answers to such questions may not be readily available, as in the case of interviews (Bryman, 2008; Naoum, 2007). Saunders *et al.* (2009) suggested that the adoption of a questionnaire technique allows the researcher to exercise some level of control over the data collection process, and by so doing, enables the researcher to obtain results from the study that are representative and generalisable to the entire population. It is believed that the internal validity and reliability of the findings will be enhanced to a large extent, if questionnaires are properly designed, structured, worded and administered (Saunders *et al.,* 2009; Naoum, 2007).

Generally, questionnaires are usually designed in two main forms: open-ended or unrestricted questions and closed-ended or restricted questions (Naoum, 2007; Fellows and Liu, 2003). The open-ended questions provide flexibility as the respondents can respond to questions in their own way without being restricted to the researcher's line of thought. No options or predefined categories are suggested. The questions are designed to elicit full information from the respondents in an open and flexible manner. They allow respondents to provide their own answers without being constrained by a fixed set of possible answers, and they can also provide alternative answers to the problems/questions when they want to do so. Closed-ended questions in contrast, are designed to elicit a limited set of specific responses from the respondents (Fellows and Liu, 2003). The closed-ended questions usually require straight forward answers, in which respondents' answers are limited to a fixed set of questions they

can choose from. They are usually characterised by short questions which often require short and direct responses (Naoum, 2007), which are readily analysed by the researcher. They are useful in obtaining specific data to confirm a fact or opinion from respondents (Saunders *et al.*, 2009).

However, using a questionnaire survey as the main data collection tool can lead to biased responses (Naoum, 2007). Equally, they can lead to deviation of responses from what the researcher is seeking to obtain from the respondents. The absence of the researcher offers no opportunity to probe the issues further for respondents to elaborate more (Bryman, 2008) or to clarify any ambiguity or deviation from the issues (Naoum, 2007). In most cases, questionnaires are characterised with lower response rates than research involving interviews (Bryman, 2008). Similarly, prospective respondents may be reluctant to complete the questionnaire, because they may consider some of the information to be too sensitive to be given out to the researcher, and also in some instances, may be unwilling to complete sections involving written exploratory responses (Saunders *et al.*, 2009).

While a questionnaire survey presents a convenient way of gathering data much faster from a larger population, they are said to be most useful and beneficial when complemented with other data collection techniques. In this sense, issues such as low rate response rates can be boosted by the application of many other techniques (Saunders *et al*., 2009). For example, a questionnaire can be used to collect a wide breadth of quantitative data to study the financial aspects of sustainable regeneration and complemented by personal in-depth qualitative interviews to study the behaviours of practitioners involved in the delivery of such projects (Fellows and Liu, 2003).

A questionnaire survey can be administered to respondents through various mediums including post and the internet using e-mail attachments or an embedded approach. According to Bryman (2008), using online questionnaires provides many advantages. They facilitate easy and speedy responses and reach out to a large number of respondents in a cost effective manner, irrespective of distance and location. They also allow for "a much wider variety of embellishments in terms of appearance" (Bryman, 2008: 645) than can be achieved through the traditional mailed approach. Similarly, by using an online service, the researcher is able to create his/her own questions speedily with the available survey software templates (Creswell, 2009), which allows for easy down loading of responses from the survey software database.

In respect of this, a questionnaire survey was adopted for this study and was administered through the internet to collect data from a large population in a timely manner.

3.9 Interviews

Personal interviews are major data collection techniques commonly used to elicit data mainly for qualitative based studies (Bryman, 2001). As they allow for social interaction and free flow of communication between the interviewer and the interviewee, they are largely regarded by many researchers as the most effective tool for gathering information that is concerned with the narration of interviewees' opinions and experiences (Qu and Dumay, 2011). They are considered to be the best data collection option in situations where the objective of the research is concerned with the exploration of feelings and attitudes of participants, in attempt to gain a deeper appreciation and greater understanding of a particular phenomenon (Denzin and Lincoln, 2008; Gray, 2006). In making a more plausible case for an interview approach, Gray (2006) indicated that the adoption of interviews becomes necessary in the following situations where:

- There is a real need for the researcher to obtain greater personalised information.
- There is a need for adequate probing of issues.
- A good response rate is required.
- The respondents have difficulty with writing.

According to Qu and Dumay (2011), the application of interviews provides a powerful means to discover new knowledge and capture the account of experts in the field in a more open, consistent and systematic manner that the standardised methods, such as questionnaires are unable to do. Unlike a questionnaire approach, where the objective is to obtain definite responses from a large sample, personal interviews essentially seek to obtain rich and in-depth information from interviewees within a well-controlled setting (Naoum, 2007). Fundamentally, most qualitative interviews are conducted on a face-to-face basis. Accordingly, this practice offers enormous opportunity for both parties to engage effectively and talk through the issues freely in greater detail without any doubt or ambiguity. Such engagements allow interviewers a great deal of latitude to probe various aspects of the issues at hand (Denzin and Lincoln, 2008; Naoum, 2007). Sunders *et al.,* (2009) argued that a personal interview approach involving such one-to-one interactions can also be beneficial to researchers in many ways; thus, they provide an opportunity for researchers to take a record

of the interviewees' non-verbal communications (Sunders *et al.,* 2009). They also help to create a platform for researchers to explain the purpose of the study. Additionally, adopting a face-to-face approach enables the creation of a favourable atmosphere for both parties to "reveal their personality and identity" (Myers and Newton, 2007: 12), build confidence and a rapport between the interviewer and the interviewee. This also allows follow up questions to be asked to get interviewees to expatiate further on their responses.

However, using interviews has some notable pitfalls. It is argued that data collected through this approach often lacks "statistical generalisations about the entire population" (Saunders *et al.,* 2009: 327). Interviews have also been criticised for their lack of a standardised approach often adopted to elicit information, which in some instances leads to a lack of rigour and reliability of the findings (Saunders *et al.,* 2009). It is also argued that data collected through such an interview approach may take some time for the researcher to transcribe and in some cases, difficult to code and analyse, especially when they involve a large number of interviewees (Gray, 2006). Again, inadequate probing and long conversation of issues during the interview process can lead to insufficient and superficial responses from interviewees (Castro *et al.,* 2012).

Various forms of interview techniques are available for conducting a social science research. However, the choice of any particular type must be grounded on the nature of the research questions as well as the objectives set out for the study (Saunders *et al.,* 2009; Gray, 2006). The most commonly used ones are: structured, semi-structured and unstructured (Naoum, 2007). Recognising the purpose of each of these interview types in Berg's (2007) view forms the basis to starting the data collection process using interviews as the main data collection tool for the study. A commonality associated with their objectives is to obtain primary information from interviewees (Bryman, 2001). However, a major distinction identified with these forms of interviews as explained below, is their degree of rigidity in relation to their mode of presentation (Berg (2007). Table 3.3 presents the characteristics of the structured, semi-structured and unstructured interviews.

3.10 Structured Interviews

In a structured interview, the interviewer controls the process by asking the same set of questions in the same order, using a set of prepared questions (Denzin and Lincoln, 2008). Typically, "most structured interviews contain mainly questions that are variously referred to as closed, closed ended, pre-coded or fixed choice" (Bryman, 2001: 108). They are very prescriptive in nature and the interviews are usually conducted within a prescribed interview setting (Denzin and Lincoln, 2008). These types of interviews are normally aligned with the quantitative-questionnaire survey approach and are therefore mainly employed to collect quantitative data using standardised questions in the same manner (Saunders *et al.*, 2009; Gray 2006). Data collected using structured interviews can be quantified much more quickly as compared to semi-structured and unstructured interviews (Cachia and Millward, 2011). However, they do not allow for improvisation in the exploration of issues, due to their standardised format. Prospective respondents receiving structured interview questions through the mail may be unwilling to complete it due to issues of confidentiality (Saunders *et al*., 2009).

3.11 Semi-Structured Interviews

Semi-structured interviews on the other hand, are mostly utilised to collect qualitative data, adopting a non-standardised approach to data collection from the interviewees (Gray, 2006). They allow a flexible approach to be adopted by the researcher, to probe deeper into issues requiring further explanations and clarification from the interviewees (Gray, 2006). Similarly, they tend to create a conducive atmosphere in a way that encourages interviewees to freely express themselves on issues, with limited direction from the interviewer only in instances of digression from the main issues (Fisher, 2004). In this approach, the interviewer prepares a set of questions, usually referred to as interview guide, which the interviewer utilises to conduct the interview with the interviewee (Qu and Dumay, 2011; Bryman, 2001). This allows the interviewer to exercise total control over the interview process (Naoum, 2007). They are the type of interviews that combine the features of both structured and unstructured interview techniques (Cachia and Millward, 2011). This uniqueness makes them most suitable for many qualitative studies, but they can be time consuming and also costly to conduct (Saunders *et al*., 2009; Berg, 2007).

3.12 Unstructured Interviews

Unstructured interviews are similar in nature to semi-structured interviews and are used to collect in-depth information from interviewees for qualitative studies. Unlike semi-structured interviews, unstructured interviews are conducted in a more open, relaxed manner with very limited prepared questions or scripts by the interviewer, to allow the interviewees the latitude to speak freely (Gray, 2006) with occasional interruptions from the interviewer (Rowley, 2012). Equally, their flexible nature allows the interview to be conducted with both open and closed-ended questions, with responses presented in no specific order (Naoum, 2007). They can achieve a higher degree of confidence from the interviewees, which is usually not the case with the standardised interviews such as the structured ones. However, these types of interviews are most suitable for relatively small studies, as conducting interviews with a "very large number of samples can be both expensive and time consuming" (Gray, 2006: 219).

However, from among the three types of interviews, the semi-structured interview was adopted for this study, given the aforementioned advantages it provides, which allow issues to be probed in-depth to enable the researcher to obtain rich information from interviewees to study complex issues such as sustainability.

Table 3.3: The characteristics of interview types

Structured interview	**Semi-structured interview**	**Unstructured interview**
Mainly for quantitative data	Mainly for qualitative data	Mainly for qualitative data
Capture data speedily	Capture data slowly and time consuming	Capture data slowly and time consuming
Uses random sampling	Uses purposive sampling	Uses purposive sampling
Uses strict interview format	Uses flexible interview format or schedule	Uses flexible interview format or schedule
Data usually easy to analyse	Data may be sometime difficult to analyse	Data usually difficult to analyse
Tend to positivist view of knowledge	Mixture of positivist and interpretivist view of knowledge	Mixture of positivist and interpretivist view of knowledge

Source: Adapted from Gray 2006

3.13 Case Study Approach

A case study research method has been acknowledged as a major research approach that offers a medium for the researcher to derive and draw wider conclusions pertaining to "societal trends and developments" (May, 2011: 221). Fisher (2004) and Yin (2003) have

both found such a case study approach useful to researchers to acquire holistic views of real life events. Yin (2009: 18), provides a simple definition of a case study as "an empirical inquiry that investigates a contemporary phenomenon in-depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident". From the perspective of Yin's (2009) definition, a case study can be seen to be providing an opportunity for researchers to gain insight into societal issues within a certain context. Drawing further inferences also means acknowledging the distinctiveness and the relevance of case studies in solving complex problems "located within a particular social context" (Gilbert, 2001: 217). Typical of the case study methods is the emphasis they place on understanding societal issues, regardless of any kind of boundaries that may exist between the issues and the context in which such issues occur. According to Gray (2006: 124), case studies are essentially relevant in situations where the objective of the investigation is centred on the understanding of the "relationship between a phenomenon and the context in which it is occurring". As they support the notion of contextuality and social phenomenon (Greene, 2006), they are naturally considered as an ideal approach for carrying out inquiries into contemporary issues (Yin, 2009). Likewise, their real-life holistic nature makes them particularly suitable for exploring a wide range of complex societal issues, processes and their interrelationships (Carcary, 2009).

Although case studies are usually based on a limited number of cases, they allow data to be collected systematically through the application of interviews, participants' observations, documentary evidence and questionnaire surveys (Saunders *et al.,* 2009; Berg 2007). These data collection techniques can be applied individually or in combination, depending on the nature of the research questions (May, 2011). Given their unique scope, both May (2011) and Gilbert (2001) strongly believed that the application of a case study will provide a workable stage through which researchers can critically engage with their participants in the field to understand, in detail, the multifaceted linkages, and other wider issues that influence their behaviours. Another major defining characteristic of a case study approach lies in its ability to facilitate the development and testing of theories (Jack and Kholeif, 2007; Berg, 2007). Sedmak and Longhurst (2010) argued that adopting a case study approach provides the potential for researchers to practically examine such theories within certain specified settings.

Variations of case study models exist in literature, however, according to Yin (2009), case studies can mainly be classified as a single case or multiple-cases, depending on the

objectives of the research. The major difference between the single and multiple case designs is primarily based on the nature of investigation and the evidence required (Yin, 2009). In a single case study, the focus of the study is limited to the examination of a single phenomenon at the "holistic level" (Gray, 2006: 131). They are useful in testing existing theories involving special or unique cases, to ascertain the appropriateness and relevance of theory propositions (Yin, 2009). Multiple case studies on the other hand, tend to provide multiple sources of evidence through the examination of multiple cases or phenomena in an attempt to build or explain theories for replication (May, 2011). They are suitable in situations where a single case approach is unable to offer a thorough exploration and explanation of the issues at hand (Carcary, 2009). Many researchers adopting this approach have emphasised triangulation, cross validation and collaboration as the main reasons for adopting a multiple-case approach. Proponents of this approach strongly believed that findings from multiple cases provide more solid evidence, credible enough to enhance the analytical generalisation than the single case studies (Yin, 2009).

Paradigmatically, case studies are considered to be more in tune with the qualitative methodology tradition, although they can also be used in certain instances for quantitative based research (Yin, 2009). However, irrespective of the paradigm adopted by the researcher, their main aim "is to contribute to the sum of total knowledge through theorisation" (May, 2011: 221). Such flexibility and knowledge creation potential among other considerations, makes them applicable to different types of subject areas (Gray, 2010), including construction project management. Barrett and Sutrisna (2009) for example, have adopted such case study approach to investigate complex processes and interactions among different stakeholder groups operating within a multifaceted construction project's environment. Therefore, it is believed that using a case approach will provide an enormous opportunity for researchers to gain deeper insights and also examine processes, trends and common behaviours of participants involved in the delivery of sustainable regeneration projects.

However, a major shortcoming of case studies lies in their inability to offer statistical generalisation of their findings to a larger population (Yin, 2009; Woodside and Wilson, 2003). Case studies research have been criticised for being open to bias interpretation and in most cases, resulting in drawing inappropriate theoretical conclusions by researchers (May, 2011; Yin, 2009). Their subjective nature makes them vulnerable to analytical manipulation by the researchers. These perceived biases and subjectivity according to Gray (2006) and

Bryman (2001), have accounted for their lack of external validity and rigour, which has also contributed to their underestimation among quantitative researchers (Gilbert, 2001). It is argued that information generated through a case study approach can be extensive and as a consequence, requires a lot of time and resources to conduct (Gray, 2006), especially when it involves travelling to projects locations (Saunders *et al.*, 2009).

It is therefore suggested that (Yin, 2009) case studies whether single or multiple, can be conducted alongside other research methods to obtain sufficient information to achieve a particular research objective. In this sense, the utilisation of data from different sources will undoubtedly lead to a greater clarity and validity of their findings (Mertens, 2010). Accordingly, based on the above characteristics, a multiple case studies method, together with semi-structured interviews as the main data collection technique was considered the most appropriate approach for this study. Using multiple cases helped the researcher to obtain in-depth, valuable and holistic information from multiple sources (Yin, 2009; Saunders *et al.*, 2009) in examining adequately the multifaceted issues of socio-economic sustainability related to the current practices of sustainable regeneration projects. Figure 3.2 illustrates the research approach adopted for this study.

Figure 3.2: Research approach adopted

3.14 Sampling Approach

It is obvious that before any meaningful research can be carried out and a valid conclusion arrived at, it is important for the researcher to consider the mode and sources from which information can be obtained. The main motivation for every researcher conducting a research is to draw sufficient information for a meaningful analysis to be carried out so that the best

conclusion can be arrived at (May, 2011). However, the major challenge researchers are often confronted with when conducting such research works, is how to estimate the number of respondents required to provide them with the information, as well as the processes through which sufficient information can be generated, to achieve their research objectives (Sarantakos, 1998). In view of this, a sampling technique has been seen as the most suitable means through which such estimation and information can be obtained in a manner that enables them to address the requirements of their research objectives. According to Bryman (2001), the need to adopt a sampling technique is central to any research work, because a sampling technique is based on sound criteria, and its adoption enables researchers to estimate, identify and obtain detailed information from a reasonable number of respondents within a targeted population. In other words, it is the technique that involves the identification and selection of "units of the target population which are to be included" in a particular study (Sarantakos, 1998: 139).

Generally, a research approach, whether a quantitative or qualitative methodology, is designed with the primary objective to collect data, considered to be representative of the larger population (Gray, 2006). Since it is usually not practical for the researcher to collect all the information required from the entire population, using a sampling technique allows the assembling of such information from a segment of the population (Saunders *et al.,* 2009). With a sampling technique approach, research data can quickly be generated from the entire population within the shortest possible time (Saunders *et al.,* 2009). However, Naoum (2013) cautioned researchers to be careful when choosing the appropriate sample size required during the research design stage, to ensure that the sample size selected is a true reflection of the entire population. Although, usually sample sizes are relative small in their composition for most research projects, it is argued that if carefully selected, it may lead to a more credible and desirable outcome (Naoum, 2013). According to Black (1999), carefully selected samples have the potential of enhancing the legitimacy and generalisation of the research findings. Hence, the need for researchers to ensure that sampling techniques adopted are holistic and robust, to enable them to address the research requirements adequately. It is further argued that sample size, irrespective of the research approach, if correctly estimated, will enable researchers to examine the variability in the samples to draw inferences from the whole population (May, 2011).

According to Sarantakos, (2013; 1998) and Saunders *et al.* (2009), the estimation of the required sample size for any particular research approach should involve the consideration of the following issues such as: the nature of the research questions, the time and resource availability, and the characteristics of the population from which the sample is required. For quantitative studies for instance, sample sizes are based on a large number of respondents, with the emphasis on making a statistical generalisations. While sample sizes for qualitative studies on other hand, are based on a relatively smaller number of respondents, with the notion of reaching a saturation point (Sarantakos, 2013; 1998). The sampling procedure adopted when using a mixed method approach, will inevitably be influenced and determined by the dominant research paradigm chosen by the researcher. Hence, many researchers using a mixed method approach will require a combination of different sampling techniques considered to be most suitable, to address their research questions and objectives (Saunders *et al.,* 2009).

There are two main types of sampling techniques available, these are probability or random and non-probability sampling (Sarantakos, 2013; 1998; May, 2011). Probability sampling techniques adopt well-structured and stringent procedures for the identification and selection of samples from the target populations (Sarantakos, 2013; 1998). They enable researchers to statistically generalise "from sample to population" (May, 2011: 99). They are useful in situations where a high degree of reliability and generalisation of the findings is required (Sarantakos, 1998). Using a probabilistic or random sampling approach also allows researchers to ensure that all participants within the defined population are proportionally represented (May, 2011; Fisher, 2004; Black, 1999). Probability sampling forms include simple random, systematic, stratified and cluster which are generally employed for quantitative-based studies (Saunders *et al.*, 2009). Non-probability sampling techniques in contrast, adopt approaches that are less stringent, and with less emphasis on representation of samples from the larger population (Sarantakos, 1998). According to May (2011), they are mainly adopted in situations where there are no well-defined sampling frames, and yet the general features of the population are already known to the researcher. Due to their flexible nature, they are mainly adopted by qualitative researchers when deciding which sample sizes are best suited for the study (Sarantakos, 1998). Their main forms include: accidental, purposive, quota and snowball sampling which are usually inclined to a qualitative based research methodology (Sarantakos, 1998; Black, 1999).

One major guiding principle that determines the identification and selection of samples from the population using either probability or non-probability types of sampling techniques is the application of a sampling frame (Naoum, 2013; May, 2011). Saunders *et al.* (2009) described a sampling frame as a complete list of all respondents located within a larger population, from which research samples are drawn. Without such an appropriate sampling frame, in which the population can be properly defined and estimated, it is almost impracticable for the researcher to collect a representative sample to arrive at a definitive conclusion, generalisable to the entire population (Saunders *et al.*, 2009). Saunders *et al.* went on to add that, using a well-defined sampling frame will enable adequate samples representativeness to be estimated and obtained. Researchers will then be able to generate a sample size which can generally be used to estimate the saturation points in qualitative terms, and also examine the sample size statistically in quantitative terms (Sarantakos, 1998). However, in using sampling frames, Saunders *et al.* (2009: 214) strongly advised researchers to ensure that such sampling frames are relatively "complete, accurate and up-to date as possible" to avoid exclusions and to keep sampling errors to the minimum.

For this study, given that the research is based on the mixed method approach, the sampling technique adopted is a combination of probability and non-probability sampling. The focus of the study is on sustainable regeneration projects in the UK. Therefore, to ensure adequate representation and balance of knowledge and experience, a well-defined sampling framework was used. For the qualitative study, a purposive sampling technique was used. This was done through the identification and selection of key practitioners involved in the delivery of sustainable regeneration projects. Purposive sampling techniques enable the researcher to select a case from among other cases since it identifies certain key features and procedures relating to the projects (Silverman, 2002). A stratified random sampling approach on the other hand, was used for the quantitative study. This was achieved by identifying key practitioners involved in the delivery of the sustainable regeneration projects. Figure 3.3 below illustrates the sampling approach used for the study.

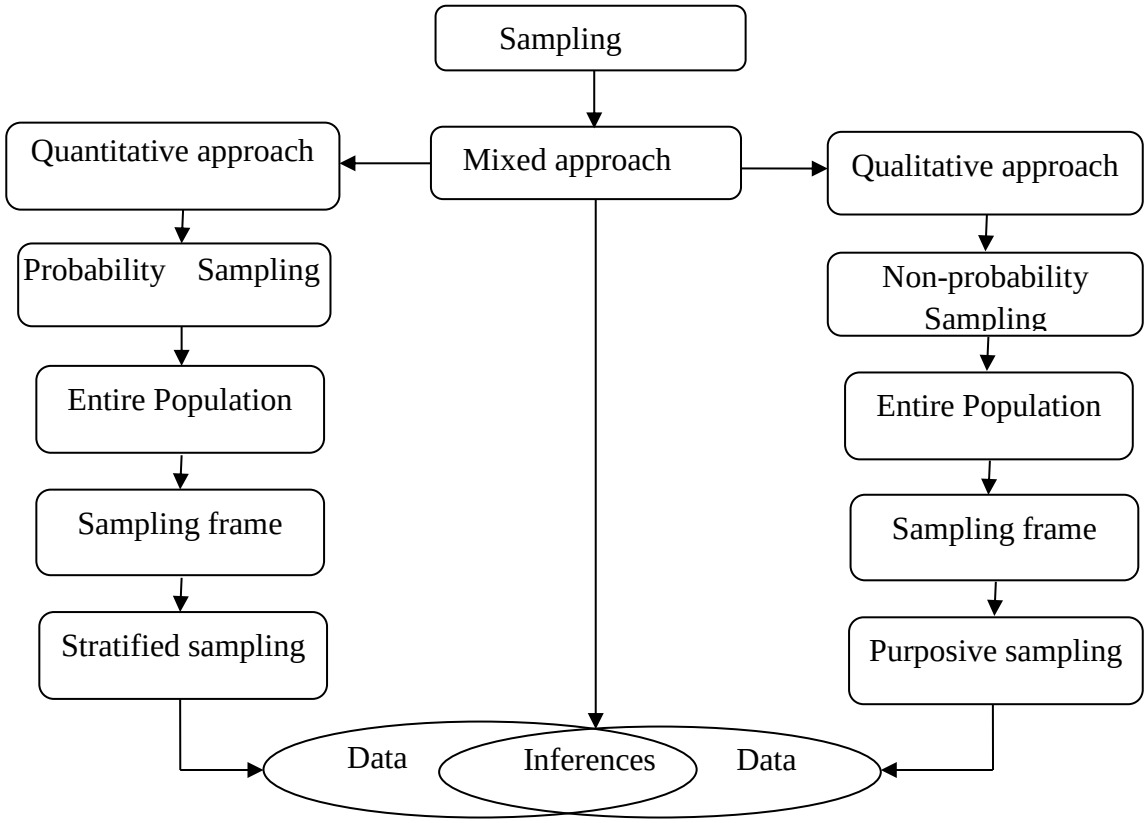

Figure 3.3: The sampling approach adopted
Source: Adapted from Saunders *et al.*, 2009

3.15 Piloting

The most fundamental objective for designing data collection instruments is to design them to be unambiguous and clear to the respondents to which they are intended (May, 2011). However, achieving this goal is very rare in practice. The decision to carry out a pilot study prior to the main study is an important one, since it is generally very difficult for a data collection instrument to be designed, devoid of any flaws. Having completed the research design, it is imperative that the researcher ensures that the data collection instruments and techniques employed are effective, reliable and valid to a very large extent, for their intended objectives (Sarantakos, 2013; Babbie, 2004). Hence, one way of ensuring that such instruments achieve their intended objectives is through conducting a pilot study (Sarantakos, 1998). According to Naoum (2007), once the data collection instrument has been designed, the next thing the researcher needs to do is to test run the instrument, otherwise referred to as piloting. Given that research instruments "do not emerge fully-fledged" (Oppenheim, 2000: 47), the best way to ensure their effectiveness is through the process of a pilot study. Sarantakos (2013) and Zhuang (1995) indicated that a pilot study forms the fundamental feature of the research process, because it enables the researcher to identify any unanticipated

problems that require attention before the main data collection begins. Gray (2006) and Bryman (2001) advised that before questionnaires for example are administered to the general population, such pilot tests are necessary to expose ambiguous and misleading questions, as this will also provide an indication of potential difficulties that are likely to affect the data collection process (Pritchard and Whiting, 2012). Following conducting a pilot study, the researcher will be able to spot any anomalies upon which adjustments can subsequently be made for the research instruments to perform to their full potential (Bryman, 2001). Feedback drawn from the pilot study will help the researcher to refine and finalize the questionnaire before sending out the final revised version (Naoum, 2013). Hence, in an attempt to utilise a data collection instrument that was devoid of errors for the present study, a pilot study was carried out as soon as the initial questionnaire was designed, before the final version was sent out to respondents. The piloting process undertaken is presented in section 3.15 below.

3.16 Conceptual Framework Development

Jabareen (2009: 57) defined a conceptual framework "as a network, or 'plane,' of linked concepts that together provide a comprehensive understanding of a phenomenon". According to him, conceptual frameworks "are not merely collections of concepts but, rather, constructs in which each concept plays an integral role" (Jabareen, 2009: 57). He went on to argue that the development of a conceptual framework is a process of theorisation which is based on data generated from multiple sources, which becomes the empirical data of the conceptual framework. Such data in his view are gathered from a number of sources to provide a comprehensive understanding of the relevant socio-economic, cultural and political aspects of societal reality. Understanding such relevant contemporary issues through the development of a conceptual framework is an important requirement towards the delivery of sustainable regeneration beyond the current practices. However, one major factor which needs to be considered when developing a conceptual framework is the clarity of the content and how such content can be applied and adapted to suit different contexts. It is believed that conceptual frameworks can form the basis on which practitioners can develop strategies to improve the delivery processes of their construction projects in a cost effective and timely manner (Delgado-Hernandez and Aspinwall, 2008). Similarly, a conceptual framework can provide "the structure for launching quality initiatives in a planned manner and offer step-by-step guidance on how to proceed if a set of goals is to be achieved" (Delgado-Hernandez and Aspinwall, 2008: 1014). Akadiri *et al.* (2012) further suggested that a conceptual framework

if well formulated and developed will enable practitioners to better understand, incorporate and implement key factors of sustainability into regeneration projects.

The proposed conceptual framework for this study is based on the sustainability principles, and in particular the social and economic factors of sustainability of regeneration projects. The framework will be developed through a review of relevant literature on sustainable development and regeneration, as well as various bodies of knowledge related to sustainable regeneration projects. The framework would then be refined with semi-structured interviews and questionnaire survey findings and finally validated with selected key practitioners. The proposed conceptual framework will be a useful tool to guide practitioners involved in the delivery of sustainable regeneration projects. The process undertaken to develop the framework for this study is akin to the one proposed by Jabareen, (2009) as shown in Figure 3.4 below. The proposed conceptual framework is presented and discussed in Chapter 9.

It can be recalled that the research approach adopted for this study was a mixed method approach which was comprised of a combination of the qualitative research phase and quantitative research phase. Therefore to meet the mixed method research requirements adopted for the study, the next sections present the processes carried out for the qualitative and quantitative phases of this study.

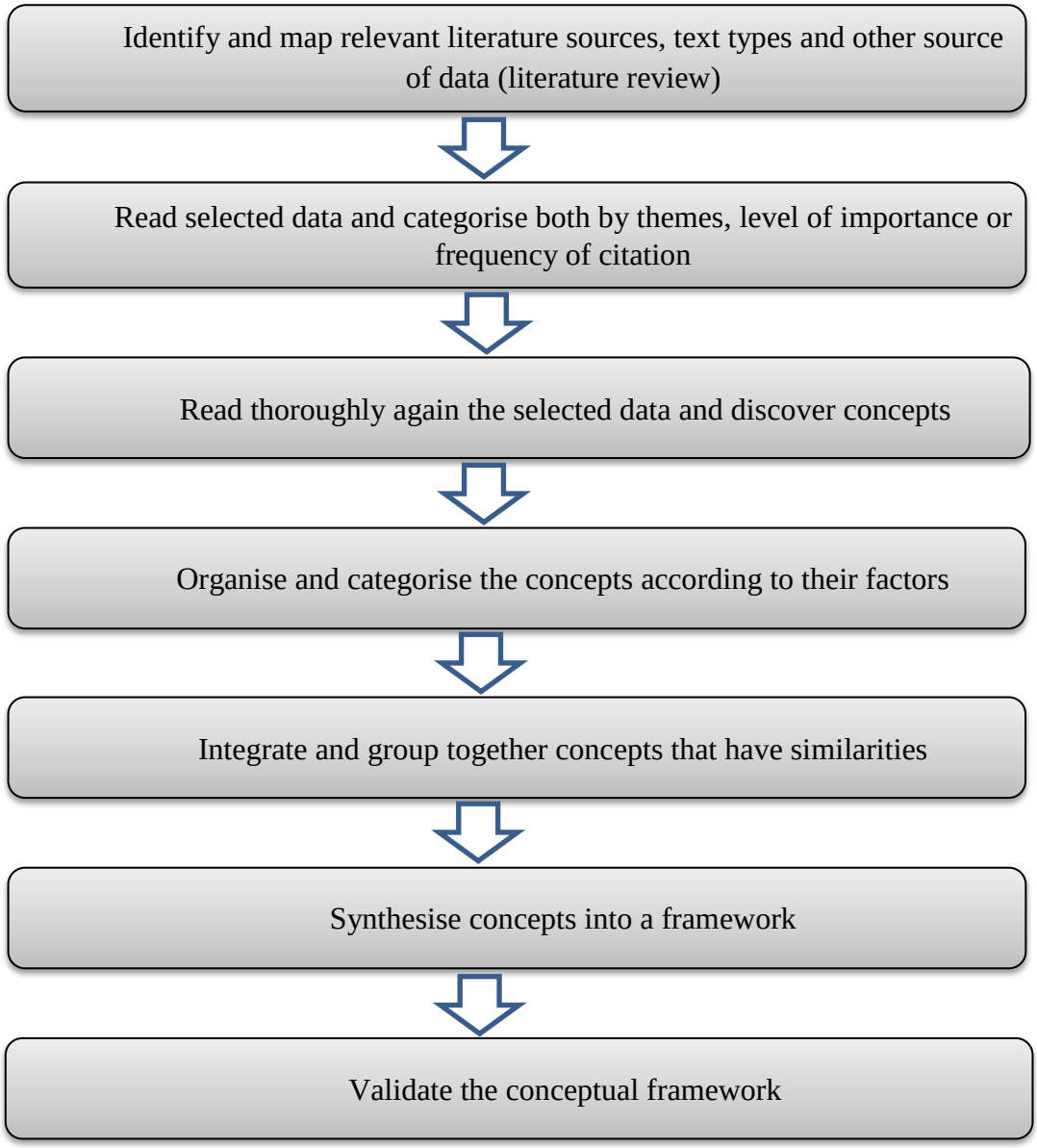

Figure 3.4: Conceptual framework development processes
Source: Jabareen, 2009

3.17 Qualitative Interview Design and Data Collection Approach

One major advantage associated with a qualitative research approach involves its capacity to produce more detailed explanations of human phenomena through the use of personal interviews (Petty *et al.*, 2012). According to Qu and Dumay (2011), the application of interviews provides a powerful means to discover new knowledge and capture the account of experts in the field in a more open, consistent and systematic manner that the standardised methods, such as questionnaire surveys are unable to do. Therefore, in respect of the above attributes, the interview approach was carried out to explore the issues and obtain rich information for the qualitative phase of the study, given that it provides a higher level of

flexibility necessary for the researcher to probe in-depth the relevant issues of sustainability required to meet the objectives of this research (Cachia and Millward, 2011). However, the type of interview adopted to collect data for this study was a semi-structured interview approach. Due to the flexible and non-standardised approach it adopts to collect data from interviewees, it was deemed appropriate for this study. Semi-structured interviews were conducted with key practitioners involved in the delivery of sustainable regeneration projects, to explore the following research questions which emerged from literature:

- What are the socio-economic sustainability factors that drive regeneration practitioners to adopt and implement social and economic sustainability in their sustainable regeneration projects in the UK? (RQ1)

- What consideration is currently given to promoting the social and economic sustainability factors on sustainable regeneration projects in the UK? (RQ2)

- What are the main barriers that impede practitioners to adopt and implement social and economic sustainability factors in their sustainable regeneration projects in the UK? (RQ3)

- What are the main UK government's social and economic regeneration policies that are influencing practitioners' policies and practices to promote socio-economic sustainability factors on their sustainable regeneration projects? (RQ4)

- How are the social and economic sustainability factors of sustainable regeneration projects being currently evaluated by practitioners in the UK? (RQ5)

Consequently, in order to answer the above questions, semi-structured interviews were carried out with twenty one (21) key practitioners from three selected construction organisations involved in the delivery of sustainable regeneration projects in the UK (see Table 3.4). The objective of carrying out these interviews was to explore the issues deeper with the key practitioners. These key practitioners (participants) were selected through a purposive sample technique from a list of top construction organisations in the North West region of the England, UK, with the experience and knowledge of delivering sustainable regeneration projects across other regions in the UK. To gain access to the participants for the interviews,

formal letters and proposals were sent to these three construction organisations for permission to use their projects for the study. Follow up telephone calls were also made to these construction organisations to further explain the purpose and the context of the study. Face-to-face in-depth semi-structured interviews were then conducted with the 21 practitioners, made up of, seven (7) practitioners from each of the three selected construction organisations, with each interview lasting for about an hour. The interviews were conducted in an interactive and open manner with a minimum interview structure in an attempt to obtain more detailed information and also to gain a deeper appreciation of the issues with the practitioners (Denzin and Lincoln, 2008). The interviews were planned to enable practitioners to freely express themselves on the issues, with limited direction from the researcher (Fisher, 2004). All the interviews were recorded and later transcribed verbatim, to allow for readability and subsequent content analysis of the interview data. A list of questions serving as a guide was used to direct the interview process in ensuring that the key areas relating to the delivery of sustainable regeneration and in particular the socio-economic aspects, were well covered. The profiles of the practitioners who were interviewed are presented in Table 3.4. A sample of the semi-structured interview question guide is shown in Appendix A. These interviews collected the required empirical data which was used for the qualitative phase of this study.

Table 3.4: The profiles of practitioners interviewed for the study

Construction Organisation	Practitioners Role
Organisation 1	Architect
	Client representative
	Project manager
	Commercial manager
	Sustainability manager
	Regeneration manager
	Training/CSR manager
Organisation 2	Architect
	Client representative
	Project manager
	Commercial manager
	Sustainability manager
	Regeneration manager
	Training/CSR manager
Organisation 3	Architect
	Client representative
	Project manager
	Commercial manager
	Commercial manager
	Regeneration manager
	Training/CSR manager

3.18 Transcribing, Coding and Analysis of the Qualitative Data

Transcribing the recoded interviews involves the presentation of the spoken word as text. It is an important process of a qualitative data analysis which requires a considerable amount of time and carefulness in ensuring that the validity of the transcribed data is not compromised. It is often regarded as an onerous task especially when large numbers of interviews are involved. However, transcribing interviews offers the researcher the advantage of gaining a better insight and greater familiarity with the interview data (Corden and Sainsbury, 2006). Therefore, in line with the aforementioned advantages, the recorded interview data obtained was transcribed. Transcribing the recorded interviews enabled the raw interview data to be extracted and presented in a textual form to enable readability of the data. Open coding approach was undertaken which enabled the interview transcript to be examined sentence-by-sentence. The text segments containing relevant information were manually coded to discover patterns/themes, which were subsequently put into two main categories (eg. very high/high, some/limited), based on their interrelationships. Specific text segments identified as key recurring themes were also coded for use as quotations (Basit, 2003) to highlight salient references identified during the analysis of interview findings. These processes enabled the data to be organised to allow for content analysis and interpretation of the qualitative data to be carried out. The qualitative data analysis process undertaken for the present study as illustrated in Figure 3.5 is in line with the process outlined by Creswell (2009).

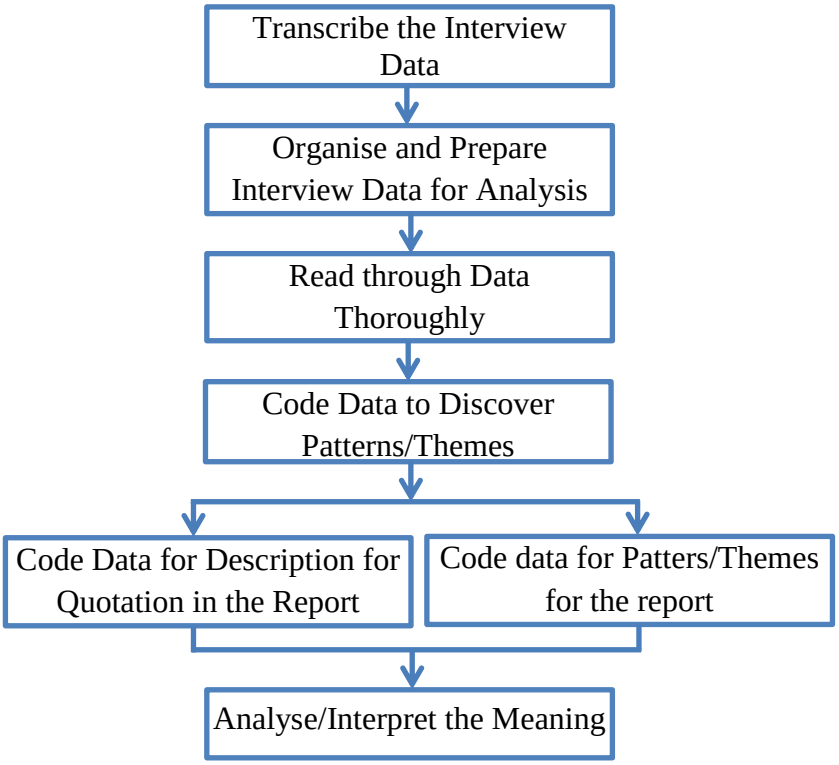

Figure 3.5: Qualitative data analysis process (Adapted from Creswell, 2009)

To fulfil the mixed method research requirement, the research processes followed for the quantitative phase of the study is also presented below. Furthermore, it is also important to note that the following words; 'practitioners' and 'respondents' are used to present the discussion in the quantitative phase of the study to mean the same thing, hence are used interchangeably.

3.19 Questionnaire Survey Design and Data Collection Approach

The researcher recognised that quantitative data collection forms a vital aspect of a mixed method research. For this reason, once the decision was arrived at to adopt a mixed method research approach, a questionnaire was developed to collect data for the quantitative phase of the study. A questionnaire survey was then formulated with closed-ended questions to allow for specific information to be obtained in confirming facts or opinions from respondents (Saunders *et al*, 2009), in order to arrive at a valid conclusion through a scientific enquiry. The questionnaire survey was divided into two sections: the general information section and the concept of sustainable regeneration section. The general information section sought to collect general information about the respondents' background, while the second section sought to gather key information relating to the concept of sustainable regeneration projects/programmes. A 5-point Likert scale was adopted for the second section of the questionnaire survey. The questionnaire survey was designed and administered online using the SurveyGizmo software tool, together with a covering letter (Saunders *et al.,* 2009).

A number of issues were identified and considered at this stage as critical to the questionnaire survey design and development process. Paramount among them was the nature of the research questions, the objective of the research and the method of administration. Therefore bearing these in mind, it was essential that the questionnaire survey was well designed to ensure that these requirements were adequately addressed.

The questions selected to elicit information from practitioners were based on the overall aim and objectives of the research. The literature review on sustainable development, the regeneration project/programme and other relevant information relating to the delivery of sustainable regeneration also informed the selection of the questions. The first questions were amended following a comprehensive discussion with the researcher's supervisor. This led to a re-structuring of the questions in addressing the specific issues raised by the research questions, before it was administered to the respondents. In trying to keep the questions

concise but as comprehensive as possible, the questions focused on the relevant issues considered as crucial in meeting the objectives of the study (Naoum, 2013). Questions were also kept short and clear to enhance understanding and also to increase the response rate from respondents.

Before the final questionnaire survey was administered to respondents, a pilot study was carried out. The decision to carry out a pilot study prior to the main study was an important one, since it enabled the researcher to "obtain some assessment of the questions' validity and the likely reliability of the data that will be collected" (Saunders *et al.,* 2009: 394). Naoum (2013) and Baker (1999) pointed out that, questionnaires, once drafted, require such pretesting to determine their effectiveness. Therefore, having completed the questionnaire design, it was imperative for the researcher to conduct such a pilot study to ensure that the survey tool was effective, reliable and valid for its intended purpose (Sarantakos, 2013). A pilot study was then carried out on a small number of respondents (who were considered to be comparable to the main study's population sample) to obtain first-hand information, before the final version of the questionnaire survey was administered. Following the pilot study, the researcher was able to spot some errors, upon which adjustment was subsequently made for the research instrument to deliver to its full potential (Bryman, 2001). Feedback drawn from the pilot study helped the researcher to refine and finalise the questionnaire, before sending out the final version (Naoum, 2013). Conducting such a pilot study also enabled the researcher to verify the strength of the research instruments (Bryman, 2001), revise the data collection strategy and instrument for the main study. Specifically, the feedback from respondents helped the researcher to reword the questions and also alter the layout and sequence of the questions. This helped significantly to reduce the time taken to complete the questionnaire to approximately 15-20 minutes.

3.20 Questionnaire Survey Overview and Administration

The questionnaire for the study was divided into two parts; the general background information part and the concept of sustainable regeneration part. The general information sought to collect general information about the respondents' background, and the second part sought to collect key information relating to the concept of sustainable regeneration projects/programmes. A 5-point Likert scale ("1" representing the "best" and "5" the "worst") approach was adopted for the second part of the questionnaire.

Part one of the questionnaire consists of two questions about the general background information of the respondents. Question one enquired about the respondents' job title, while question two enquired about the respondents' experience in relation to the delivery of sustainable regeneration projects in the UK. Part two of the questionnaire on the other hand, consists of seven closed-ended questions. The closed-ended questions covered issues such as; the extent of the key practitioners' level of involvement in the delivery of sustainable regeneration projects' types (question 3) and at three main stages (early, construction, post construction) of the project's delivery (question 4), while question 5 covered the factors driving practitioners to adopt and implement social and economic sustainability factors in sustainable regeneration projects. Question 6 touched on the degree of consideration given to the promotion of the 'identified' social and economic sustainability factors on regeneration projects. Question 7 covered the barriers that were impeding practitioners to adopt and implement socio-economic sustainability factors in their sustainable regeneration projects. Question 8 covered the UK government's social and economic regeneration policy drivers that were influencing practitioners to adopt and implement social and economic sustainability factors in their sustainable regeneration projects. Question 9 touched on the evaluation practices which were being followed by practitioners to evaluate the social and economic sustainability factors on their sustainable regeneration projects. The closed-ended questions provided the opportunity to obtain a specific set of responses from the respondents (Fellows and Liu, 2003), which then enabled the data to be readily analysed by the researcher. Appendix B shows the questionnaire format and the nature and type of questions asked.

Samples for the administration of the questionnaire survey were randomly selected from the list of 300 leading construction organisations published by turnover in the 2012 editions of the Building Magazine and New Civil Engineer Magazine in the UK. The questionnaire survey was administered through the internet, together with a covering letter explaining the objectives of the research to the selected respondents. The covering letter specifically provided background information about the researcher, outlined the main objectives of the study, gave reasons why the respondents' assistance was being sought and finally provided assurance on issues relating to confidentiality of the respondents (Sarantakos, 2013). A copy of the covering letter is shown in Appendix C.

In all, a total of three hundred (300) hyperlinks were emailed out to the selected respondents involved in the delivery of sustainable regeneration projects/programmes across the UK, in

the second week of January, 2013. To obtain the email addresses of the respondents, the selected respondents' construction organisations were contacted through telephone calls, as well as through a search on the organisations' websites. Pre-survey contacts were also made by telephone calls, and emails were also sent to the selected respondents before the final questionnaire survey was sent out to them. Follow-up emails were sent out and telephone calls were also made two weeks later to thank the respondents who have completed the questionnaire and also to remind those who were yet to respond to it. This was done to further emphasise the importance of completing the questionnaire on time and also to increase the response rate (Saunders *et al.*, 2009). Overall, within a period of 4 weeks, a total of 193 responses were received, representing an overall response rate of 64.33% out of the total selected sample of 300. Table 3.5 show the breakdown of the questionnaire distribution, completion rate, and the response rate respectively.

Table 3.5: Questionnaire survey distribution, completion and response rate

Organisation Category	Questionnaire Distributed	Completed Questionnaire Received	Questionnaire Not Completed	Response Rate
Construction organisation	300	193	107	64.3%
Total (N)	**300**	**193**	**107**	**64.3%**

The aforementioned procedures undertaken helped to increase the response rate for the study. However, to deal with the issues of non-response bias, the questions of the questionnaire survey were made mandatory. In addition to this, attempt was also made to ascertain if they were any significant issues of non-response bias of the data collected by comparing the non-response results obtained for individuals respondent group characteristics (architect, client's representative, etc.) with the results obtained for individuals respondent group characteristics (architect, client's representative, etc.) who responded to the questionnaire survey. The analysis indicated insignificant differences between the two individuals' respondent group characteristics (architect, client's representative, etc.) of the non-respondents and respondents. This indicated that the data was a good representation of the survey population. This further suggested the absence of any likely bias of the data obtained for the study. Rogelberg, and Stanton (2007: 200), argued that "although some observed differences might exist, it is important to understand that these differences between respondents and non-respondents (or the population in general) do not necessarily indicate response bias". By comparing the

respondents and non-respondents group characteristics, the researcher was able to ascertain if they were any non-response bias within the data set (Denscombe, 2010; Rogelberg and Stanton, 2007). This technique has also been used by Valck *et al*. (2007) to check for non-response bias of their data by comparing respondents' response and non-response characteristics. And by observing that the differences in the response and non-response characteristics were insignificant, they concluded that the non-response bias was unlikely to be present in their data.

On the whole, another way this study dealt with non-response bias was through a triangulation or the application of different set of data (interviews and questionnaire survey) (Rogelberg, and Stanton, 2007). Using both data obtained under varying conditions has enabled substantially to mitigate the effect of non-response bias for this present study.

The questionnaire survey for the study was targeted at the key practitioners involved in the delivery of sustainable regeneration projects within their respective construction organisations. The results and statistical breakdown of the key practitioners who responded to the questionnaire survey are also shown in Table 3.6.

Table 3.6: Results and statistical breakdown of respondents of the questionnaire survey

Practitioners	**Frequency**	**Percentage**	**Valid Percentage**	**Cumulative Percent**
Architect	29	15.0	15.0	15.0
Client representative	25	13.0	13.0	28.0
Project manager	29	15.0	15.0	43.0
Commercial manager	32	16.6	16.6	59.6
Sustainability manager	27	14.0	14.0	73.6
Regeneration manager	26	13.5	13.5	87.0
Training/CSR manager	25	13.0	13.0	100.0
Total N	**193**	**100.0**	**100.0**	

The results obtained from the questionnaire survey also indicated the frequency or number of years the key practitioners who responded to the questionnaire survey have spent in delivering sustainable regeneration projects, as shown in Table 3.7.

Table 3.7: Frequency/years spent on sustainable regeneration projects spent on sustainable regeneration projects

	Frequency	Percent	Valid Percent	Cumulative Percent
Less than 1 year	5	2.6	2.6	2.6
One to five years	44	22.8	22.8	25.4
Six to ten years	46	23.8	23.8	49.2
Eleven to fifteen years	32	16.6	16.6	65.8
Sixteen to twenty years	32	16.6	16.6	82.4
More than twenty years	34	17.6	17.6	100
Total	193	100	100	

3.21 Method of Data Analysis

A critical stage of a research process is the analysis of data collected. Saunders *et al.* (2009) argued that the use of analytical methods provides a better platform for researchers to provide answers to their research questions. In ensuring that data analysis is carried out in a systematic and logical manner, Sarantakos (2013) outlined six steps to be followed when undertaking computer aided analysis for quantitative research as:

- Preparation of the collected data by cleaning and checking for possible errors and omissions.
- Entering the prepared data into the SPSS for analysis.
- Presenting the findings from the analysis in graphical and table forms.
- Conducting inferential statistics analysis of the data.
- Presenting the data with tables and figures, and explaining the findings, and
- Finally, drawing a conclusion from the analysis of the findings.

According to Saunders *et al.* (2009), paying attention to such steps has the potential to reduce the possibility of errors and the opportunities for misinterpretation and the drawing of wrong conclusions from the research findings.

Hence, for this study and in line with the above steps, the preparation of data was the first approach towards the data analysis process, as it allowed the researcher to check and edit the raw data obtained for any possible errors or omissions and inconsistencies within the data set. This was done after the responses from the questionnaire survey were downloaded from the SurveyGizmo software and then exported into an excel spread-sheet. The edited data was then

exported into the Statistical Package for the Social Sciences (SPSS) for the analysis processes to begin. Using computer software for the analysis was seen as the best way to ensure validity and reliability of the research findings because of the standardised procedures SPSS adopts for data processing and analysis (Sarantakos, 2013). Once the data was fed into the computer software, the researcher was "able to explore and analyse them far more quickly and thoroughly than by hand" (Saunders *et al.*, 2009: 365).

For quantitative oriented studies, there are two tests which are normally conducted, parametric and non-parametric tests. Their use depends on the type and nature of the data collected. Non-parametric tests make fewer assumptions about data and are used under situations where the data collected is deemed not to be normally distributed. They are most suitable with a relatively small amount of data which can be measured on nominal and ordinal scales, and are more flexible to apply (Pallant, 2010). Parametric tests on the other hand, are based on an assumption about the population from which the data is taken (Fellow and Liu, 2008). They depend on interval-scaled data based on a normal distribution of data. Their data analysis processes tend to be considerably more difficult and complex than the non-parametric tests. Therefore, a good analysis can be carried out when the researcher is aware of the analytic procedures and assumptions underlying their choices. For the present study, the data collected was nominal (questions 1-2) and ordinal (questions 3-9) data. Moreover, the Kolmogorov-Smirnov and Shapiro-Wilk normality tests (Table 3.8) carried out on the data also indicated significant (sig) values of .000, which are less than .05. According to Pallant (2010: 63), significant values (of Kolmogorov-Smirnov and Shapiro-Wilk normality tests) less than .05 suggest a "violation of the assumption of normality", hence the choice for a non-parametric test for this research. Such 'abnormality' in the distribution of the data collected in Pallant's (2010) view justifies the use of a non-parametric test as the best approach for the analysis for the study.

Table 3.8: Normality test

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
HD4	.261	193	.000	.856	193	.000
PSBP4	.307	193	.000	.834	193	.000
PSCB4	.253	193	.000	.880	193	.000

a. Lilliefors Significance Correction

3.22 Reliability Test

From a quantitative research perspective, a reliability test provides very vital information and measurement on the internal consistency of responses across questions in the questionnaire survey. A number of methods are available for measuring the reliability of questionnaire survey data however, the most common method used to measure inter-item reliability and internal consistency of a questionnaire survey is the Cronbach's Alpha (Pallant, 2010). The level of acceptance on a measure of internal reliability of the items on the questionnaire survey when using Cronbach's Alpha, ranges from 0 to 1.0 (Fellow and Liu, 2008), where "0" means a completely unreliable result and "1.0" means a completely reliability result. Ideally, the crucial level to determine internal reliability using Cronbach's Alpha coefficient, which is generally considered to be acceptable, is 0.7 (Pallant, 2010). Achieving values above 0.89 provides more acceptable results and a greater internal reliability of the results. According to Fellow and Liu (2008), inter-item reliability is a good measure of questions consisting of more than one variable, while also providing an indication of the degree of internal consistency among variables on the scale.

In order to determine whether the questionnaire survey instrument used was reliable in measuring what it was intended to measure and also check the internal reliability (Sarantakos, 2013) of the data, Cronbach's Alpha was conducted. The reliability test conducted on the questionnaire survey as in Table 3.9 shows the Cronbach's Alpha value of 0.943, suggesting that the questionnaire has very good internal consistency reliability. Achieving Cronbach's Alpha coefficient above 0.7 is generally considered to be acceptable, and values above 0.89 are considered to be a very good level of internal consistency (Pallant, 2010). Therefore the value of 0.943 obtained above implies that the questionnaire, to a very large extent, is consistent and reliable. By conducting Cronbach's Alpha test, the researcher was able to determine the "reliability of a summated scale where several items are summed to form a total score", and the inter-items consistency of the questions (Fellow and Liu, 2008: 266).

Table 3.9: Results of reliability test

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.943	.942	20

3.23 Descriptive analysis method

The descriptive analysis phase begins once the data has been cleaned and entered into the computer (SPSS) software. It presents the simplest way to undertake the analysis of the quantitative data in a manner that gives a general overview and picture of the findings (Naoum, 2013). Usually, descriptive analysis is carried out to provide statistical information such as the mean, median, and standard deviation as well as percentages of the variables (Pallant 2010). Seale (2005) intimated that the determination of the mean, median and the mode values provides a measure of central tendency, while the standard deviation value provides an indication of dispersion of the data. With the application of descriptive analysis and the determination of central tendency and dispersion, the researcher is able to "perform validity checks on the samples" (May, 2011, p.122). For example, a descriptive analysis performed on organisational practices will enable the researcher to describe and give a vivid account of an organisation's activities. For this reason, the quantitative data collected for this study was subjected to descriptive analysis to determine the mean values, standard deviation and percentage values, to aid the analysis in providing a detailed account of the data for the study. Doing so also enabled the researcher to describe and compare the results both graphically and numerically. Following that, the researcher was able to apply further statistical analysis methods to establish relationships and interpretation of the results.

3.24 Summary

This Chapter presented the research philosophy, the methodology and the research methods adopted to achieve the aim and objectives set out for the study. It provided a detailed account of the research philosophy, the pragmatic research approach, research methodology, the mixed method research approach and the two main data collection techniques; semi-structured interviews and questionnaire survey approaches adopted for the study. It highlighted the advantages and disadvantages, and the strengths and weaknesses of the two research methodologies; qualitative and quantitative, and the two data collection techniques; semi-structured interviews and a questionnaire survey, and went on to justify the reasons for their adoption for the study. Furthermore, it provided the research approach followed to collect the qualitative data from 21 key practitioners for the qualitative phase of the study. It also explained the approach undertaken to collect the quantitative data using the questionnaire survey, from 193 practitioners who participated in the quantitative phase of the study, and presented the results obtained from the questionnaire survey. The conceptual framework development approach adopted was also highlighted. The Chapter further reported the results

of the normal distribution test conducted on the quantitative questionnaire survey data, which forms the basis for a choice of the non-parametric test for the study. The results of the reliability test conducted on the questionnaire survey were also provided. Finally, the Chapter outlined the processes, procedures and the methods of analysis adopted for the qualitative and quantitative phase of the study. The next Chapters therefore present the results and data analyses of the qualitative semi-structured interviews and quantitative questionnaire survey for the study.

CHAPTER 4 KEY PRACTITIONERS' INVOLVEMENT IN SUSTAINABLE REGENERATION PROJECTS

4.1 Introduction

The aim of this Chapter is to explore the second objective of the research; the levels of key players' involvement in sustainable regeneration projects/programmes. The Chapter begins by providing the background literature on the impacts and importance of the key practitioners' involvement in the sustainable regeneration projects delivery process. It goes on to present the findings and analyses from both the qualitative and quantitative data obtained through semi-structured interviews from 21 practitioners, and 193 responses obtained through the survey of respondents (practitioners) who have responded to the survey for this research. The analysis of each section (issue) is first presented qualitatively and is complemented by the presentation of the quantitative data analysis. Finally, it presents the summary of the findings and the recommendations of the Chapter.

4.2 Involvement of Key Players (Practitioners) in Sustainable Regeneration Projects

In the context of regeneration, the involvement of key players in the delivery of projects is fundamental to the projects' sustainability outcomes. It is important to establish the roles and the level of involvement of practitioners, as these are crucial towards the adoption and implementation of sustainability features in regeneration projects. Conventionally, the interactions and linkages between these key players ultimately influence and determine the overall performance of the projects (Takim, 2009). It has also been argued that engaging key practitioners appropriately in project delivery processes can help to influence efforts towards the adoption and implementation of a wide range of sustainability deliverables for the projects (Mathur, *et al.,* 2008).

Numerous challenges associated with the management of projects' teams identified by previous contributors include inadequate involvement and undefined roles of key stakeholders among others factors (Yang *et al.,* 2009). Sustainable construction projects, and in particular regeneration projects, consist of a number of complex and interactive activities which require a number of practitioners to deliver them. It has been said that sustainability features in regeneration projects are multifaceted and often subjected to different processes and interpretations during different stages of the project, and therefore require a collective approach to drive the sustainability processes of the projects. Feige, *et al.* (2011) pointed out

that the sustainability concept in itself causes various forms of challenges to different groups of practitioners. According to Mathur *et al.* (2008), the contesting nature of sustainability issues and the benefits associated with the delivery of sustainability projects, provide a compelling case to effectively engage key players in their delivery processes. The processes and activities involved in delivering sustainable regeneration projects are also often considered as complicated. Such complexities have also been cited as one of the reasons for many practitioners' inability to adopt and implement sustainability features on their projects in practical terms (Tippett *et al.,* 2007).

The complexity and the multifaceted nature of sustainable regeneration projects, coupled with the implications and impacts of sustainability, make it even more crucial to engage key players in the delivery of sustainable regeneration projects. Hence, the requirement to adopt and implement sustainability features in regeneration projects, taking into account the multi-dimensional issues and impacts, calls for a "multi-scale, trans-disciplinary and pluralistic approach that is able to integrate and synthesise the many different perspectives" for the project (Lombardi, 2009: 179). In that way, many sustainability challenges associated with the execution of such complex activities and processes can well be dealt with. It is only then that such a project's sustainability deliverables can be addressed collectively. The performance and achievement of the projects' sustainability outcomes largely depends on the inputs from these players. It is believed that sustainability features would be best executed when key players are actively represented in such regeneration delivery processes. Adequate involvement of key players will also ensure effective collaboration to overcome any possible difficulties and divisions, which are likely to undermine the projects' success. Active and effective involvement, particularly at the conception stages of the projects, is considered as fundamental towards the adoption and implementation of sustainability aspects in regeneration projects.

It is suggested that focusing attention on the selection and formation of the main project team early in the planning stages is fundamental in achieving the successful delivery of a project's objectives (DBIS, 2013; Rowlinson *et al.,* 2008). It is believed that a project team, if well-formed, with individual practitioners well represented in the team formation process, would enable such practitioners to understand what is required to be achieved in terms of sustainability (Mathur *et al.,* 2008). Apparently, such an approach will also help to foster a strong spirit of corporation among practitioners, overcome divisions and oppositions to new

ideas, build consensus to create "a context-specific interpretation of sustainability" and align the project's sustainable objectives with practitioners' perspectives (Mathur *et al.*, 2008: 606). Table 4.1 shows the summary of interviewees (practitioners) levels of involvement in the delivery of sustainable regeneration projects.

4.3 Key Practitioners' Roles, Responsibilities and Level of Involvement in the Delivery of Regeneration Projects

In the context of this study, the roles of practitioners means their professional background (i.e. architect etc.), while the responsibilities refer to the core duties (i.e. preparing drawings, designing etc.) they perform in the delivery of the projects. Also, practitioners identified to be mainly involved in the delivery of regeneration projects, who participated in the semi-structured interviews and questionnaire survey, are referred to as key practitioners in this Chapter. Below are the identified key practitioners, and their roles and responsibilities in the delivery of sustainable regeneration projects:

- Architect: is the practitioner tasked with the responsibility of producing the drawings and design solutions of the project to meet the client's needs/requirements.

- The client's representative: For the purpose of this research, the client representative is any practitioner representing the client's interests on the project. The greatest responsibility for achieving the client's requirements lies with the client's representative, who is one of the most influential practitioners in the construction project delivery processes.

- Project manager: is the practitioner responsible for managing and coordinating processes, resources (including other practitioners on a daily basis), and facilitating effective delivery of all the projects' deliverables, to meet all the requirements of the projects, and also provides other construction information on progress and variations. A key practitioner for the adoption and implementation of decisions etc., for the project.

- Commercial manager: is the practitioner responsible for managing and controlling the cost aspects of the project.

- Sustainability manager: is the practitioner responsible for the sustainability aspects, including the environmental aspects of the project. They are responsible for ensuring that all other practitioners, including the client's representative, are aware of their sustainability responsibilities in relation to sustainable construction projects.

- Regeneration manager: is the practitioner responsible for developing regeneration strategies for the project and ensuring that sustainable regeneration features are incorporated into the project, to deliver a wide range of regeneration outcomes for stakeholders, including the local community. They provide advice on sustainable regeneration deliverables to the project team/practitioners.

- Training/corporate social responsibility (CSR) manager: is the practitioner responsible for ensuring that the local content is incorporated in the project. This includes recruitment and procurement of local labour and materials, and training and apprenticeships and work placements etc., for local people on the project.

The involvement of the above key practitioners for the purpose of this study means engaging the key practitioners as participants in the discharge of their responsibilities in the delivery of regeneration projects. In this regard, the words 'involvement' and 'engagement' are used interchangeably to mean the same thing in this Chapter. The qualitative and quantitative studies undertaken for this study collected data through semi-structured interviews and a questionnaire survey, respectively, from these key practitioners identified to be involved in the delivery of sustainable regeneration projects within their construction organisations. In all, a total of twenty-one (21) semi-structured interviews were conducted with the key practitioners, while 193 responses were also received from practitioners who participated in the questionnaire survey phase of the study.

Face-to-face semi-structured interviews were conducted with twenty-one (21) key practitioners as identified above (7 practitioners from each of the three selected construction organisations), to ascertain their level of involvement in the delivery of sustainable regeneration projects at the three main delivery stages (early, construction and post-construction). Each of the three selected construction organisation was made up of all the seven key practitioners: architect, client's representative, project manager, commercial manager, sustainability manager, regeneration manager, and training/CSR manager. Thus, 3-

architects; 3- clients' representatives; 3- project managers; 3- commercial managers; 3- sustainability managers; 3- regeneration managers, and 3- training /CSR managers from the 3 selected construction organisations as shown in Table 3.4.

All the twenty-one (21) interviewees (key practitioners) were asked questions about their level of involvement in the delivery of sustainable regeneration projects at these three main stages of the sustainable regeneration projects' delivery in undertaking the following activities:

- Planning and preparation (PP)
- Adoption and implementation (AI)
- Coordination and supervision (CS)
- Monitoring and evaluation (ME)

The Royal Institute of British Architects' (RIBA) outline plan of work (2007) forms the basis for the definition of the projects' main delivery stages - early, construction and post construction. At the early stage of the projects' delivery, the main activities that are performed by the key practitioners are planning and preparation. Although planning and preparation are two separate words, they are employed in this study to refer to all the activities that are required to be undertaken before the commencement of the construction stage of the project. These include feasibility, goal setting, design, tendering etc. Planning and preparation could be useful to ensure a greater buy-in from all the key practitioners, to achieve a common objective for the project. Undertaking planning and preparation activities would help to set out performance targets for other activities (i.e. AI, CS, and ME).

At the construction stage of a projects' delivery, the main activities that are to be undertaken include adoption and implementation, and coordination and supervision. Adoption refers to the embracement of activities from the early stage, while implementation is concerned with implementing the adopted activities. In other words, putting the 'adopted' activities into practice. Coordination activities entail the interaction and integration of work and resources, while supervision activities on the other hand, are concerned with overseeing the performance of works and resources.

At the post construction stage of the projects' delivery, the activities that are required to be carried out in the context of this Chapter include monitoring and evaluation. Even though the words 'monitoring' and 'evaluation' are two separate words, they are used in this context to mean the tracking of performance towards the specified targets set out at the early and construction stages of the projects' delivery processes.

Table 4.1 presents the results of the views provided by the key practitioners during the semi-structured interviews. The analysis of the interviews in Table 4.1 indicated that there were primarily two main levels of practitioners' involvement in the projects' delivery stages.

Table 4.1: Interview results of practitioners' level of involvement in three main stages of sustainable regeneration projects

Practitioners	Early Stage		Construction Stage				Post Construction Stage	
	Always /very often involved	Sometimes /rarely involved	Always /very often involved		Sometimes /rarely involved		Always /very often involved	Sometimes /rarely involved
	PP	*PP*	*AI*	*CS*	*AI*	*CS*	*ME*	*ME*
Architect	3	-	3	3	-	-	1	2
Client representative	3	-	3	2	-	1	3	-
Project manager	-	3	3	3	-	-	1	2
Commercial manager	-	3	3	3	-	-	-	3
Sustainability manager	-	3	2	2	1	1	-	3
Regeneration manager	-	3	2	2	1	1	-	3
Training and CSR manager	-	3	2	2	1	1	-	3
Total	**6 (28.8%)**	**15 (71.43%)**	**18 (86%)**	**17 (81%)**	**3 (14%)**	**4 (19%)**	**5 (24%)**	**16 (76%)**

In exploring the key practitioners' frequency of involvement in the delivery of sustainable regeneration projects, it was observed from the analysis of the interviews, that there were primarily two major categories/levels of practitioners' levels of involvement in the delivery of sustainable regeneration projects, as shown in Table 4.1. The results from the analysis of the interviews, have shown that all the 21 key practitioners who participated in the interviews, were involved at the three main stages of the sustainable regeneration projects' delivery. At the early stages, 6 (28.8%) practitioners were always/very often involved in carrying out

planning and preparation activities for the projects, while 15 practitioners, representing over 71% were only sometimes/rarely involved in the aforementioned activities at this stage of the projects' delivery. At the construction stages of the projects' delivery, 18 (86%) practitioners were always/very often involved in undertaking adoption and implementation activities for the projects, while only 3 (14%) practitioners were sometimes/rarely involved in carrying out adoption and implementation activities at this stage of the projects' delivery. Additionally, 17 (81%) practitioners were always/very often involved in coordination and supervision of various activities for the projects, while only 4 (19%) practitioners were sometimes/rarely involved in the coordination and supervision of activities for the projects. Finally, at the post construction stage, it was observed that only 5 (24%) key practitioners were always/very often involved in the monitoring and evaluation activities for the projects. The majority of practitioners, 16 (76%), were only sometimes/rarely involved in the monitoring and evaluation activities of the projects.

In terms of the questionnaire survey, the results (Table 4.2) obtained from 193 respondents/practitioners who responded to the questionnaire survey, suggested that at the early stages of the project delivery, 89.1% of clients' representatives were always/very often involved, while 86.6% of commercial managers and 82.4% of architects were also always/very often involved at this stage of the project delivery. The results also revealed that 65.8% of project managers, 61.1% of sustainability managers, 46.1% of training/CSR managers and 35.8% of regeneration managers were equally always/very often involved at the early stages in the delivery of sustainable regeneration projects. At the construction stage, 89.1% of project managers, were always/very often involved the delivery of the projects, followed by 81.4% of clients' representatives, 79.3% of commercial managers and 63.8% of sustainability managers respectively. Similarly, 60.2% of architects, 45.6% of training/CSR managers and 36.8% of regeneration managers were also always/very often involved in the delivery of the projects. Finally, at the construction stage of the projects' delivery, 65.3% of clients' representatives were always/very often involved, while 43.5% of sustainability managers, 40.9% of architects, 39.9% of regeneration managers, 37.8% of training/CSR managers, as well as 36.8% of project managers and commercial managers were equally always/very often involved in the delivery of the projects.

Table 4.2: Questionnaire survey results of practitioner's level of involvement in three main stages of sustainable regeneration projects

Practitioners	Total N= 193	Early stage	Construction stage	Post construction stage
		Mean / (%)	Mean / (%)	Mean / (%)
Architect	29	1.83 (82.4%)	2.40 (60.2%)	2.81 (40.9%)
Client representative	25	1.58 (89.1%)	1.80 (81.4%)	2.23 (65.3%)
Project manager	29	2.30 (65.8%)	1.51 (89.1%)	2.91 (36.8%)
Commercial manager	32	1.67 (86.6%)	1.98 (79.3%)	2.91 (36.8%)
Sustainability manager	27	2.41 (61.1%)	2.33 (63.8%)	2.72 (43.5%)
Regeneration manager	26	2.96 (35.8%)	3.05 (36.8%)	2.97 (39.9%)
Training, CSR manager	25	2.66 (46.1%)	2.61 (45.6%)	2.92 (37.8%)

As per the interview findings in Table 4.1, it can be observed that two categories of key practitioners, 3 clients' representatives and 3 architects, were the most (always/very often) involved during the early stages of the projects. These results are validated by the results obtained from the 193 practitioners who participated in the survey phase of the study. The practitioners who took part in the survey, ranked clients' representatives, architects and commercial managers as the three most involved practitioners during the early stages of projects' delivery (Table 4.2). In support of existing literature (Idoro, 2009; Ali, *et al.*, 2008), it can be seen that architects and clients' representatives are still playing leading roles, and are predominantly more (always/very often) involved than other practitioners in planning and preparation activities at the early stages of the sustainable regeneration projects delivery. At the early stage of any project development, the client is expected to assemble a team to carry out their vision. According to Hussin, (2009), this phase involves putting in place the requisite drawings, programmes and strategies as well as selecting the appropriate resources for the project. Conventionally, at the early stage of a project's delivery, where planning and preparation activities are carried out, is considered the domain for clients or clients' representatives and architects and in some instances, commercial managers. A study carried out by Ali, *et al.* (2008), and Hussin (2009) also identified the early stage of the project delivery as the domain for architects and clients' representatives, in which the two practitioners were heavily involved in planning and preparation activities of the projects. Their works also lend support to the above findings.

It is suggested that the early stage of every project's development is crucial because any decision made at this stage has far-reaching implications for the project's overall outcomes. Toor and Ogunlana's (2009: 163) study of a construction project's critical success factors has revealed that "most of the highly rated critical success factors are related to the active involvement of clients or their representatives and other key practitioners at the projects" early developmental stages. Smith and Jagger (2007: 38), in their earlier work, agreed to the aforementioned argument that decisions which are taken during the early stages of the project's development; for example, at the briefing and feasibility stages, results in "more far reaching economic consequences than the relatively limited decisions which can be made later in the process". This position is further supported by MacLeamy Curve (Figure 4.1) which clearly shows that decisions made early in the projects development have the ability to impact the successful delivery of the project outcomes. This is because once the projects kick off, the opportunity to introduce and maximise the sustainability potential benefits for instance, are reduced to a minimum and in some cases, are missed out.

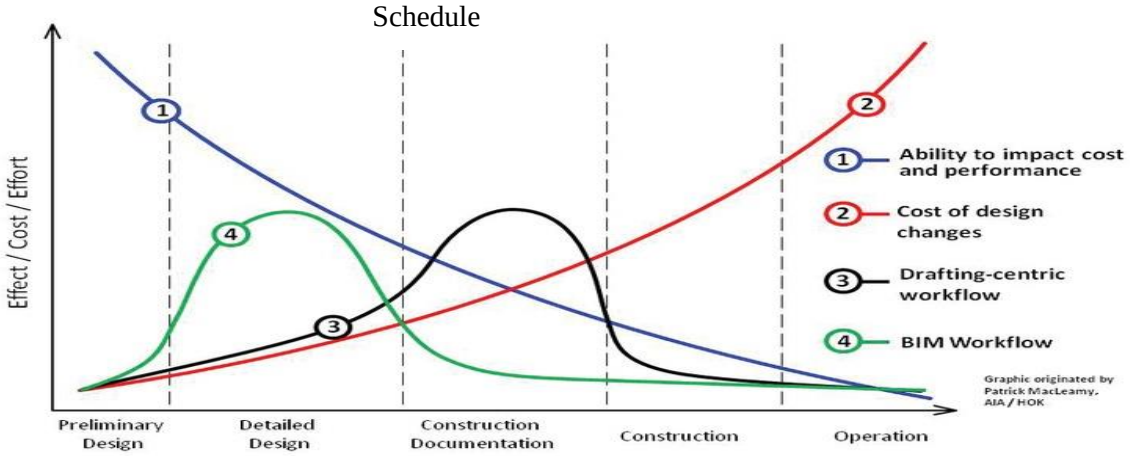

Figure 4.1: MacLeamy Curve (American Institute of Architect, 2007)

The always/very often level of involvement of clients or clients' representatives at the early stage as per the above findings, could also be due to the fact that clients will always want to ensure that their projects are planned and designed to meet the time, cost and quality requirements. However, it is asserted that plans and strategies carried out at this stage of the project development have an impact and implications not only on the cost, time and quality aspects of the projects, but also on the performance of sustainability functions of the projects (Pitt, *et al.*, 2009). Hence, clients or their representatives need to be aware of that, particularly when they are engaging practitioners' services at this stage to deliver their sustainable regeneration projects. Similarly, clients are also very particular about the quality of their

projects, hence their desire to always engage competent architects at the very early stages of their projects' development to provide them with the design solutions that will meet their needs. This point was affirmed by one client representative who indicated that he needed to get a competent architect involved as soon as possible, for them to drive the design process forward.

Contrary to the interview findings, practitioners who participated in the questionnaire survey ranked commercial managers as the second most (always/very often) involved practitioners at the early stages of the projects. The differences in the findings could be due to the limited number of practitioners (21) who participated in the study. As the questionnaire survey obtained views from a larger population than the interviews, hence the differences in their findings. For most clients and construction organisations, the early involvement of commercial managers provides the opportunity for them to seek early advice about the cost implications of adopting and implementing sustainability features on their projects. It can also be observed that early involvement of architects, clients' representatives and commercial managers tends to be in line with the traditional approaches often adopted, to involve key practitioners in the planning and the preparation activities at the early stages of construction projects. Traditionally, the first port of call when clients want to procure practitioners' services for their proposed projects is the architects and other selected practitioners who they believe will help them achieve their objectives. The above position is supported by Smith's (2006) work in which he indicated that many construction projects have been planned and procured only with selected groups of practitioners, just to meet some limited or specific projects' objectives for the clients. Hence, it can also be inferred from the above findings, that clients' representatives, architects and commercial managers' always/very often level of involvement at this stage of the project delivery was due to the particular roles they play in making sure that planning and preparation activities of the projects achieve certain specific objectives for clients (Smith, 2006). However, the reliance on such limited practitioners' contributions and the traditional approach of involving practitioners in the planning and preparation activities at the early stage of the project's development has a number of problems, most especially when the projects are of a sustainability nature. Such an approach will largely limit the projects' success factors to cost, time and quality objectives and in the case of sustainable regeneration, relegates the sustainability aspects to the background. It is argued that the successful delivery of sustainable regeneration lies in adequate and early involvement of all the key practitioners, particularly at the early phase (OGC, 2011). Hence,

the early and 'always/very often' involvement of all the key practitioners will inevitably enable greater planning and preparation of the projects' critical success factors beyond the current cost, time and quality objectives, to include the sustainability deliverables of the projects.

Surprisingly, a greater number of practitioners (Table 4.1), 15, made up of; 3- project managers, 3- commercial managers, 3- sustainability managers, 3- regeneration managers, and 3- training/CSR managers, were sometimes/rarely involved during the early stages of the projects' development in undertaking planning and preparation activities. A number of factors can be seen to have accounted for this. The obvious ones include practitioners' roles, (their professional background) demands from clients and the projects' requirements have played a major part in determining practitioners' level of involvement during the early stage of the projects' delivery. A view expressed by one of the interviewee's; a training/CSR manager, during our discussions, related his sometime/rarely involvement to meeting such projects' and clients' requirements:

"I sometimes get involved at the early stages of our projects, but that depends on what the client or the contract want us to deliver…It differs from project to project, and each client has his own views on how we should do that…"

Delivering sustainable regeneration projects is about the responsibility of all the key practitioners to contribute to the planning and preparation activities of the projects. It is argued that construction projects' sustainability "performance outcomes depend upon inputs" from different players (Smyth, 2008: 635). Practitioners such as project managers and others with sustainability responsibilities are crucial in the sense that their early and always/very often level of involvement will enable them to understand clients' needs as well as the projects' requirements, to translate them into practice during the construction stage of the projects. However, the results from the interviews, which were also supported by questionnaire findings, showed that practitioners who have sustainability specifically assigned to their roles and responsibilities were not always/very often involved at the planning and preparation activities during the early stages of the projects. Their sometimes/rarely level of involvement could also be due to the fact that the priorities and interests of most clients and construction organisations were/are driven by considerations other than the sustainability aspects of their projects. Similarly, these categories of practitioners' sometimes/rarely level of

involvement at the early stage of the projects, as per the findings, is consistent with Murray and Cotgrave's (2007) study conducted with local authorities in England and Wales, in which it was observed that practitioners (except clients representatives and architects) were 'differentiated' and were less involved in the design and planning activities at the early stages of many building projects.

A prevailing situation identified with practitioners' during the interviews was that training/CSR managers were not always/very often involved in the planning and preparation activities of the projects. They were only brought in when their clients decided to bring in trainees. This point was made clear by one of the training/CSR managers who indicated that she was only brought in when their clients wanted trainees on the projects and in most cases, trainees were handed to her during the construction stages of the projects, to manage them.

"...I rarely get involved at this stage of the project. ...Normally I get involved when our clients have confirmed those who are going to be the trainees on the project, which is normally at the construction stage of the project to help put the process in place to manage them".

Construction activities have limited duration, therefore early and always/very often level of involvement of training/CSR managers for example, can enable them to identify the right caliber of people for training, to enable them to put in place the kind of training that can be offered within the projects' durations. The stage at which involvement of such key practitioners takes place has the potential to determine what and when certain sustainability features can be prepared and planned, adopted and implemented, and also monitored and evaluated on projects. From the perspective of sustainable regeneration, the requirement to achieve sustainability of regeneration projects calls for more integrated and proactive approaches to the early and always/very often level of involvement of key practitioners in the planning and preparation activities of the projects. Similarly, since sustainability features have often being a subject of contention in construction projects and difficult to deal with in practice, such early and always involvement of all the key practitioners would enable different perspectives of sustainability features to be incorporated into the planning and preparation activities of projects in a proactive manner. It is suggested that the key to any successful regeneration project is about the practical involvement of all the key practitioners, particularly at the early stage of the project's development (Takim, 2009). Likewise, such 'early and

always' engagement would not only provide an avenue for practitioners to pursue a common sustainability course, but would also provide an enabling environment to proactively respond to any potential issues that may undermine the planning and preparation activities of the projects.

One major implication for the 'sometimes/rarely' level of involvement of key practitioners in the planning and preparation activities at the early stage of the projects could be the lack of understanding and corporation among practitioners involved in the delivery of the projects. A point which was emphasised by one project manager:

"I think there will not be a greater buy-in from us if we are not involved early in the process".

The 'sometimes/rarely' level of key practitioners' involvement in contributing to the planning and preparation activities at such a crucial stage could also have serious cost implications if changes or corrective measures are to be made at the construction and post construction stages of the projects. Consequently, any act of inadequate involvement of all key practitioners, particularly those with sustainability responsibilities at the early stage of sustainable regeneration projects, could jeopardise the achievement of the projects' sustainability outcomes. It can however be suggested that practitioners, if always/very often involved early in the planning and preparation activities, could be instrumental in advising many clients and construction organisations on the issues of sustainability for the adoption and implementation of such sustainability features in their projects at the construction stage. The opportunity for practitioners to develop new options and ideas of sustainability issues during this stage of the project could also be maximised (Tippett *et al.*, 2007).

At the construction stage, practitioners owe it a duty to ensure that activities are well adopted, implemented, supervised and coordinated, to meet the required standards of the projects (Hussin, 2009). At the construction stage, the involvement of practitioners is mainly concerned with the adoption and implementation of activities from the early stage, coordinating and supervising activities, including the workforce. During the construction stage of the projects' delivery, the results from the interviews revealed that; 3- clients' representatives, 3 -architects, 3- project managers and 3- commercial managers were always/very often involved in the adoption and implementation, and also in the coordination and supervision activities for the projects. These results are largely supported by questionnaire

survey results obtained from 193 practitioners who took part in the survey. In the questionnaire survey, the project managers were ranked the most involved practitioners, followed by the clients' representatives, commercial managers and architects, respectively during the construction stage of the projects.

It is obvious that this is the stage of the project delivery where a number of construction activities are adopted and implemented. This is also considered the domain for project managers, clients' representatives, commercial managers and architects. The coordination and supervision activities are also greater at this stage of the project development. Hence, most clients' representatives will be interested in the coordination and supervision activities as well as the adoption and implementation activities, in line with their budget, quality and time requirements. On the other hand, the project managers' coordination and supervision activities are crucial at this stage in ensuring that the physical projects are delivered to meet the projects requirements. Likewise, commercial managers are also expected to supervise and coordinate the cost management processes of the projects. The involvement of architects is also fundamental here too, in making sure that they supervise and coordinate activities to deliver the projects according to the designs of the projects. According to Hussin (2009), the involvement of architects at this phase of the project would enable them to supervise and coordinate work quality in line with their design and specifications.

Again, an inspection of Table 4.1 shows that at the construction phase of the projects, 2- sustainability managers, 2- regeneration managers and 2- training/CSR managers (with assigned sustainability roles and responsibilities) were always/very often involved in carrying out adoption, implementation, coordination and supervision activities on the projects. Although there seems to be an improvement in their level of involvement in comparison to their level of involvement at the early developmental stage of the projects, nonetheless, at least one from each of this group of practitioners (assigned sustainability roles and responsibilities) interviewed, were only sometimes or rarely involved at the construction stage of the projects. These results are also backed by questionnaire survey findings, in which this aforementioned group of practitioners were ranked the least involved during the construction stage of the projects development. For this group of practitioners, it can be suggested that because they are not seen as practitioners who primarily contribute to meeting the conventional projects' cost, time and quality objectives, their contributions at the construction stage could be ignored, especially, when clients and their construction organisations involved

in the delivery of the projects are not inclined to sustainability issues. In this regard, most clients and construction organisations will tend to concentrate on their core business objectives, rather than pursuing and venturing into other new areas they consider will increase their expenditures (Williams *et al.,* 2013).

At the post construction stage, which is obviously after the completion of the physical project, some of the main activities which are required to be undertaken involve performance monitoring and evaluation of the completed projects. Apparently, this is one of the stages of the project's delivery where the activities carried out from the early stage through to the construction stage of the projects are required to be monitored and evaluated, to provide the opportunity to ascertain the performance of the completed projects. In a study conducted by Williams *et al.* (2013), nearly 85% of practitioners who were involved in the study strongly agreed with the view that the use of post project monitoring and evaluation could contribute to learning and also assist in improving the project's sustainability performance of completed sustainable construction projects.

At the post construction stage of the project, it was noticed that of the 21 practitioners who were interviewed, only 3- clients' representatives, 1- architect and 1- project manager were always/very often involved in undertaking monitoring and evaluation of the completed regeneration projects. The frequent level of involvement of clients' representatives was also confirmed by the mean values obtained from the questionnaire survey of 193 practitioners conducted by the researcher. Equally, in terms of their sometimes/rarely level of involvement, there was agreement between the results obtained from the majority of practitioners who were interviewed and the results obtained from practitioners who participated in the questionnaire survey. These results also lend support to the recent study conducted by Williams *et al.* (2013), in which it was observed that the majority of key practitioners were not involved in post project monitoring and evaluation activities, whenever their projects were completed and handed over. Conventionally, the involvement of practitioners in many construction projects has been concentrated on the construction stage. For most 'normal' construction projects, when the major physical works are completed and the projects are handed over, only a limited number of practitioners are needed to carry out certain corrective works. Hence, the sometime/rarely level of involvement at this stage of the project by the majority of practitioners as per the findings, typifies the practitioners' level of involvement in such 'normal' construction projects.

However, the situation can be seen to be different when it comes to sustainable regeneration projects. The sustainability performance requirements for regeneration projects go beyond the completion of the physical projects on site. The impact of sustainability aspects of regeneration projects, and in particular the socio-economic ones on the quality of life of society, extend far beyond the construction stage of the projects. As a result, several other issues which can impact on the sustainability performance of the projects will require attention after the practical completion of the projects. Likewise, the opportunity to monitor and undertake the evaluation of the sustainability performance of the completed projects to enable learning for future projects also becomes crucial at this stage of the projects' delivery. Accordingly, in recognition of this, Williams, *et al.,* (2013) have emphasised the need for an active and always level of involvement of key practitioners in the monitoring and evaluation of the sustainability aspects of their sustainability projects upon completion. It is believed that such an approach could result in the optimisation of practitioners' learning experiences and understanding of potential benefits of sustainability features for future regeneration projects.

Overall, it can be observed in Tables 4.1, 4.2 that clients' representatives' were the most (always/very often) involved practitioners among other six key practitioners who participated in the study. Their always/very often level of involvement has been consistent throughout the three delivery stages (early, construction and post construction) of the projects. Architects were the next most involved practitioners, with their always/very often level of involvement occurring at the early stage and construction stage of the projects' delivery. With commercial managers' levels of involvement, there were variations in the results. The findings from the interviews indicated that commercial managers' involvement was always/very often at the construction stage, while the questionnaire survey findings on the other hand, showed an always/very often level of involvement at the early and construction stages of the projects. The project managers' level of involvement was also seen to be always/very often involved at the construction stage, however with a sometime/rarely level of involvement at the early and post construction stages of the projects' delivery. The findings from both the interviews and questionnaire survey, indicated that practitioners who have sustainability assigned to their roles and responsibilities (regeneration managers, sustainability managers, training/CSR managers) were the least (sometime/rarely) involved in all the three stages of the projects.

One other issue that can be inferred as a reason for the varied levels of practitioners' involvement is the nature and types of current building contracts employed to procure and

deliver sustainable regeneration projects. A study by Akintoye and Main (2007) on collaborative relationship in construction cited in Williams *et al.* (2013), claimed that the type of contract used in delivering construction projects can be a major determinant of practitioners' level of involvement and collaboration on the projects. Building contracts such as the Joint Contract Tribunal (JCT), New Engineering Contract (NEC) and other standard forms of contracts currently in use, are seemingly in tune with the traditional procurement and delivery methods for 'normal' construction projects. Their emphasis and wording are focused on the contractual relationship between the client and contractor, rather than ensuring an individual key practitioners' involvement in the delivery of the projects. Hence, the need for the construction industry practitioners to review the current building contracts to reflect issues that are concerned with the level of involvement of key practitioners in the delivery of the projects. It is believed that such an approach will make it mandatory for clients and other clients' organisations to ensure that the key practitioners who are required to deliver sustainable regeneration projects are actively and always/very often involved. The manner in which regeneration projects can generate sustainability benefits will largely depend on the roles, responsibilities and contributions from practitioners, and the stage of project's delivery at which they are brought on board. It is argued that by taking different experts and practitioners' perspectives into account, and developing a formalised approach to engaging such key practitioners, a meaningful realisation of the projects' sustainability deliverables can be arrived at in a holistic manner (Lombardi, 2009).

While this present study has considered the frequency of the key practitioners' involvement in the delivery of sustainable regeneration projects at the three main delivery stages of the projects, nonetheless, several other studies obtained through the literature review, have dealt with the degree of practitioners' involvement, in-depth on a number of construction projects, using various research approaches (Oyedele 2013; Idoro, 2009; Hussin, 2009; Ali *et al*, 2008). These studies have explored the level of involvement of key practitioners in the delivery of various construction projects at three main stages of the projects' delivery. The findings from one such study by Hussin (2009) and Ali *et al.* (2008), has shown that practitioners such as architects, clients or clients' representatives and commercial managers were more dominant in their roles and responsibilities during the early stages of the projects, and were more highly involved in undertaking planning and preparation activities than other key practitioners. The early stage of the project delivery was also found to be the domain of these key practitioners. Apparently, these findings can be seen to be a true reflection of the frequent (always/very

often) levels at which the architects, clients' representatives, and commercial managers were involved at the early stage of the projects. Hussin (2009) and Ali *et al.'s* (2008) studies are also reinforced by Idoro's (2009) study of construction project leaders' involvement in new construction projects in which clients, architects and commercial managers were seen to be highly involved, in playing various leading roles and responsibilities in a number of activities during the early stage of projects. According to Ali *et al.* (2008), the high level of involvement of architects was important to enable them to lead the planning and preparation activities and also help to define and translate clients' visions for the projects; while the high level of commercial managers' involvement was equally necessary in helping clients to plan and prepare tender documents at this stage of the projects. They went on to indicate that since clients were the owners of the projects, their high level of involvement at the early stage was crucial to enable them to drive the visions of their projects. The high level of commercial managers' involvement, as per Ali *et al.* (2008) and Idoro's (2009) findings, support the questionnaire survey findings but contradict the interview findings obtained for this study.

At the construction stage where most of the construction activities take place, literature has shown that all the key practitioners have been involved at this stage of the projects delivery (Ali *et al.,* 2008). However, the key practitioners who were highly involved in discharging their responsibilities at this stage of the projects' delivery were the architects, clients, project managers and commercial managers (Ali *et al.,* 2008; Trigunarsyah, 2004). Ali *et al.* (2008) and Trigunarsyah's (2004) works have also shown that there was an incremental level of involvement from other key practitioners particularly those who were often perceived not to be contributing to the achievement of the projects' core objectives. Accordingly, for this study, these practitioners can be seen to be those with the assigned sustainability roles and responsibilities. The high and increased level of practitioners' involvement at this stage, in Ali *et al.'s* (2008) view, was due to the increased volume of activities that were required to be performed at this stage of projects.

At the post construction stage, empirical results obtained from the literature review revealed that clients and architects were predominantly more highly involved than the other key practitioners in undertaking post project monitoring and evaluation activities of the completed projects (Williams *et al.,* 2013). Again, this stage of the project delivery was also seen as the domain for clients and architects. In the work of Hadjri and Crozier (2009), cited in Williams *et al.* (2013), it is highlighted that the use of post project monitoring and evaluation practices

within the current construction industry is still limited to some groups of key practitioners. In respect of this view, the low/very low level of involvement of other key practitioners (except the client) as per the literature review findings, support the findings of this study in which it can be observed that only the clients' representatives and a few key practitioners were always/very often involved in carrying out their responsibilities after the projects were completed.

It is worth noting that the aforementioned studies obtained through the literature review were carried out on construction projects that were procured and delivered with the traditional procurement systems. Hence, it could be suggested that the level at which the key practitioners were involved in discharging their responsibilities at the projects' delivery stages could be as a result of the requirements of the traditional procurement systems. It can also be observed that even though some of the projects used for their studies were sustainable construction projects, nonetheless these projects were not sustainable regeneration projects. Therefore it is important that a further study is carried out to ascertain in more depth, the key practitioners' levels of involvement at the aforementioned delivery stages of sustainable regeneration projects.

It is also suggested that the level of practitioners' involvement in different types of regeneration projects can potentially enhance their knowledge and understanding of sustainability features in the pursuit of different types of sustainable regeneration projects. Hence, the next section presents the data analysis and discussion on practitioners' frequency of level of involvement in the delivery of the 'types' of sustainable regeneration projects.

4.4 Involvement in Types of Regeneration Projects

Sustainable regeneration is a vital aspect of the UK sustainable development agenda in which a lot of effort has been made over the years to provide regeneration projects in the areas of housing and other flagship projects (SDC, 2003). The literature review has shown that sustainable regeneration initiatives have traditionally and fundamentally been centred on three main types of projects (housing, and public and private sector commercial projects) (Dixon, 2006; SDC, 2003). Traditionally, the UK regeneration strategy has evolved from the provision of affordable housing through to the provision of other public sector projects and later to private sector commercial projects. The growing pressures on national and local governments to meet the infrastructural needs of communities has accounted for this

development. The formation of these types of regeneration projects has set the context and also served as an indicator for the performance assessment of the sustainable regeneration agenda by built environment practitioners. Using these types of regeneration projects has created a broader framework on which regeneration practitioners have continued to espouse and measure the performance of a range of sustainable regeneration projects.

It is believed that combining the efforts and benefits from this range of regeneration projects would have a more far-reaching impact than if it were just one form of regeneration project. Consequently, the provision of these types of regeneration projects assumes a greater significance within the paradigm of the sustainable regeneration development agenda. The delivery of housing-led regeneration for example, can contribute to improving the wellbeing of communities through the provision of affordable houses, while the provision of public and private sector projects, such as schools and shopping centres, have the potential to deliver other socio-economic sustainability objectives for communities. Hence, the level of involvement in such a range of regeneration projects would have a significant impact on practitioners' knowledge and understanding of sustainability features, enabling them to meet each regeneration project's sustainability requirements.

In the context of this study, the three main types of sustainable regeneration projects are housing projects, public sector commercial projects and private sector commercial projects. Housing regeneration projects refer to dwelling or residential houses, while public sector regeneration projects refer to other regeneration projects (other than housing and projects with commercial inclinations) which are provided only by the public sector (e.g. schools, hospitals etc.). Private sector commercial regeneration projects on the other hand, are types of regeneration projects which are provided by the private sector or with the private sector as a partner, and which have commercial inclinations (e.g. retail/shopping centres, office buildings etc).

It must be stated here again, that this study only attempted to establish the frequent levels at which the key practitioners were involved in the delivery of these three types of sustainable regeneration projects. It can also be observed that there have not been any studies on practitioners' levels of involvement in the delivery of the aforementioned types of regeneration projects. Therefore in view of this, the author recommends that a further study be

conducted to explore in more depth, the practitioners' levels of involvement in the delivery of these three main types of sustainable regeneration projects.

In an attempt to establish the key practitioners' frequency of level of involvement in these types of sustainable regeneration projects as indicated above, semi-structured interviews were conducted with the key practitioners listed in section 4.3. This was supported by a questionnaire survey which collected data from 193 respondents (key practitioners) who participated in the study. The breakdown of the interview results is presented in Table 4.3, while the questionnaire survey results are presented in Table 4.4. During the analysis process, there were two main levels of practitioners' involvement that emerged through the analysis of the interviews as shown in Table 4.3.

Table 4.3: Interview results of the types of sustainable regeneration projects and level of involvement

Practitioners	**Project types and level of involvement**					
	Housing		Public sector project		Private sector commercial project	
	Always/ very often involved	Sometimes /rarely involved	Always/ very often involved	Sometimes /rarely involved	Always/ very often involved	Sometimes /rarely involved
Architect	3	-	3	-	2	1
Client representative	3	1	2	1	2	2
Project manager	3	-	2	1	2	1
Commercial manager	2	1	2	1	1	2
Sustainability manager	1	2	1	2	-	2
Regeneration manager	1	1	1	2	1	2
Training/CSR manager	1	2	1	2	-	3
Total N=21	**14 (67%)**	**7 (33%)**	**12 (57%)**	**9 (43%)**	**8 (38%)**	**13 (62%)**

Table 4.4: Statistical of responses of types of regeneration

Project types	Mean	Always/very often involved (%)
Housing Development	2.29	66.3 (%)
Public Sector project	2.36	60.3 (%)
Private Sector Commercial project	2.60	47.0 (%)

The semi-structured interviews were conducted with twenty-one (21) key practitioners as identified above (7 practitioners from each of the three selected construction organisations) to ascertain their level of involvement in the different types of regeneration projects (as indicated above). Each of the three selected construction organisations was made up of all the seven (7) key practitioners namely: architect, client representative, project manager, commercial manager, sustainability manager, regeneration manager, and training/CSR manager. Refer to Table 3.4 for the profile of key practitioners and their organisations.

The results from the interviews as in Table 4.3 show that housing-led regeneration is the most (always/very often) involved type of regeneration projects, followed by public sector projects and private sector commercial regeneration projects, respectively. These results are strongly corroborated by the results obtained from the 193 respondents who took part in the questionnaire survey, as presented in Table 4.4. In support of the above results, 66.3% of practitioners who participated in the questionnaire survey were always/very often involved in the delivery of housing-led regeneration projects, while 60.3% and 47.0% were always/very often involved in public sector projects and private sector commercial projects, respectively. The views of the majority of practitioners who participated in the interviews and questionnaire survey are also consistent with the literature review.

An inspection of Table 4.3 indicates that 14, (67%) of the 21 practitioners who took part in the semi-structured interviews were always/very often involved in the delivery of housing led regeneration projects, while 7 (33%) of the 21 practitioners were sometimes/rarely involved in delivery of the housing types of regeneration projects. A further examination of Table 4.3 also shows that, 12 (57%) of the 21 practitioners were always/very often involved in the delivery of public sector types of regeneration projects, while a good number of practitioners, 9 (43%) of the 21, were also observed to be sometimes/rarely involved in the delivery of these types of regeneration projects. For private sector commercial projects, the results show that only 8 (38%) of the 21 practitioners were always/very often involved in the delivery of these types of regeneration projects. A substantial number of practitioners, 13 (62%) were only seen to be sometimes/rarely involved in the delivery of the aforementioned types of regeneration projects.

Evidence from the literature has shown that housing-led regeneration has been a major policy initiative and has played a major part in the provision of affordable housing across the regions

in the UK. According to Haran *et al.* (2011), Glossop (2008) and HM Treasury (2007), the UK government over the years has concentrated its regeneration policy and efforts in the affordable housing sector and has made a significant investment in housing regeneration to increasing the housing stock to meet the increasing demand for housing. This position was corroborated by the majority of practitioners (67%) who were interviewed, by indicating that their involvement in housing regeneration projects was mainly due to the importance the UK government has attached to the provision of housing. This result was also confirmed by the results obtained from 66.3% of the respondents who participated in the questionnaire survey. This, in effect, has brought about a lot of housing 'building' contracts than the other types of regeneration projects, in and around the communities. As one of the practitioners noted:

"I think that is probably because of the importance the government has attached to it. Housing seems to be the most obvious regeneration projects you can find around in our cities…"

Works done by Winston (2009) and Dixon (2006) have also identified the need to provide much higher levels of new and affordable housing projects, as the brain behind the UK government's sustainable regeneration strategy. The above result is further supported by recent work done by SERCS (2011) which suggested that the main focus of the UK's sustainable regeneration strategy has traditionally being the advancement of the housing sector for poorer communities (Special Economics Research Center Strategies (SERCS, 2011).

One other deduction that can be made from the above findings in Tables 4.3 and 4.4 is that the high (frequent) levels at which practitioners were involved in the delivery of housing regeneration was due to the fact that most of the construction organisations the majority of practitioners were working for were mainly involved in the delivery of housing regeneration projects. According to Smith (2006), many of the construction organisations who are currently involved in regeneration projects have a credible history in the social housing sector. This position was highlighted by one of the practitioners:

"I have spent more than half of my career working for companies who have worked closely with the local and national governments to provide decent and affordable housing regeneration schemes for people…"

While housing is considered as an important aspect and at the heart of regeneration development, it is argued that the provision of housing regeneration projects in itself cannot be considered in isolation to deliver sustainable regeneration that is needed to meet the growing infrastructural needs of society (Smith, 2006). Housing and other types of regeneration projects form an important part of regenerating communities (CLG, 2011). Although housing can be seen to be limited in scope in terms of the provision of sustainable regeneration projects, however, one major benefit that can be associated to practitioners' frequent levels of involvement in the delivery of housing regeneration projects could be the acquisition of knowledge and expertise in the area of housing regeneration projects. Similarly, it can be said that such levels of involvement could also provide their organisations with the opportunities to develop their capacities and expertise in the area of housing regeneration projects. This was acknowledged by one of the practitioners during the interviews by saying:

"I have developed much of expertise and experience in housing regeneration projects, and my organisation has so much expertise when it comes to housing regeneration…"

It can be deduced that the acquisition of such knowledge and expertise has played a major part towards the formation of organisations/associations such as; the Registered Social Landlords and Homes and Communities Agency organisations who are currently involved in the promotion and delivery of housing regeneration projects in the UK. However, although regeneration activities have focused mainly on the social housing sector, it is believed that the regeneration impact can only be fully and appropriately felt if other types of regeneration projects are considered alongside. Consequently, the focus needs to go beyond the provision of housing-led regeneration projects to include the provisions of other types of regeneration projects.

From the findings in Tables 4.3 and 4.4, it is also observed that the private sector commercial projects were the least frequently involved regeneration projects by practitioners. The results from the interviews (Table 4.3) indicate that, while just 8 (38%) practitioners were seen to be always/often involved in the delivery of these types of projects, the majority of practitioners, 13 (62%) were only sometimes/rarely involved in their delivery. The results of the questionnaire survey (Table 4.4) also show that only 47% of practitioners were always/often involved in the delivery of these regeneration project types. The low frequency of the level of practitioners' involvement as per the results is not surprising, since the literature review has

indicated that the private sector commercial projects are the last types of regeneration projects to be introduced among the three types of regeneration projects in recent times in the UK. Again, it can be inferred that because of their perceived commercial inclinations, a very limited number of these regeneration project types can be undertaken by clients and construction organisations and for practitioners to be involved in their delivery. Although seen to be the least frequently involved among the other types of regeneration projects, however, the contributions of these project types to the development and achievement of sustainable regeneration objectives, can be said to be indispensable, hence the need to equally develop these types of regeneration projects. Doing so would help to create the opportunity for practitioners and their organisations to be frequently involved in their delivery. This could also go a long way to enhance practitioners' knowledge and understanding of various influencing sustainability factors for their delivery. The knowledge and expertise acquired through the delivery of these types of regeneration projects could also be used to advise their organisations, policy makers and potential clients who may want to undertake such regeneration projects in the future.

4.5 Statistical or Inferential Analysis Test/Methods

Statistical or inferential analyses are performed to determine the significance of research findings in relation to the larger population from which the sample is drawn (Sarantakos, 2013). They are classified into two main categories: the test of significance and measure of association (May, 2011). Testing for significance allows the researcher to analyse the extent to which the results can be generalised from the sample to the entire population. The measure of association on the other hand, provides an indication about the level of relationship between the variables. Although they are usually used to test hypotheses, they can also be used to examine research questions and theoretical models of the research (Saunders *et al.*, 2009). The most commonly tests used to determine the level of significance and a measure of association include: Chi-Square, Mann Whitney U test, Kruskal-Wallis tests, Spearman's rank correlation tests and Pearson's moment-product correlation coefficient tests (Sarantakos, 2013; Fellows and Liu, 2008). These are the types of parametric and non-parametric tests which are normally employed if the researcher is interested in measuring the strength and direction of association between the variables, which is also known as a correlation analysis (Nardi, 2006).

In addition to the above analyses, an attempt was also made to ascertain if there was a significant relationship between the extent to which practitioners were involved in these types of sustainable regeneration projects (housing, and public sector and private sector commercial projects) using a Chi-square test. Since the interview results and the questionnaire survey (descriptive) results have indicated differences in practitioners' levels of involvement between these three types of sustainable regeneration projects. The results obtained in Table 4.5 show the chi-square value of 64.591 for housing development, 139.047 for public sector projects and 41.741 for private sector commercial projects. At a significant level of alpha value of 0.05, it can be seen that the extent of practitioners' levels of involvement tested for the three sustainable regeneration project types are significant, as the Asymptotic Significant value obtained is .000 in each case. Therefore from these results, it can be said that there is a significant association between practitioners' levels of involvement with respect to the three types of sustainable regeneration projects. This could also mean that some practitioners who were involved in the delivery of housing regeneration projects were also involved in the delivery of the two other types of sustainable regeneration projects, and therefore highly ranked their involvement in the three types of projects. The results can also be said to be a true reflection of the target population from which the questionnaire survey samples were taken for the study (Sarantakos, 2013).

Table 4.5: Chi-square test of level of practitioners' involvement in regeneration projects

Test Statistics			
	Housing Development	Public Sector project	Private Sector Commercial project
Chi-Square	64.591[a]	139.047[a]	41.741[a]
df	4	4	4
Asymp. Sig.	.000	.000	.000
a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 38.6.			

4.6 Summary

The requirement to deliver successful regeneration projects places enormous responsibility on the construction industry practitioners. While the concept of sustainable regeneration has being a big industry in the UK (SDC, 2003), and also being in operation within the construction industry over the years, it can be said that its achievement has been hampered and determined by numerous factors. One such factor which has affected and continues to

affect and determine the outcome of regeneration projects, are the key practitioners who are tasked with the responsibility of delivering such regeneration projects.

Drawing from the findings, it can be observed that the frequency of the levels at which practitioners, have been involved in the delivery of the different types of regeneration projects and also at different stages of the projects' delivery vary significantly. Various factors are said to have accounted for these varied levels of involvement. These include the projects requirements and the types of regeneration projects practitioners' organisations were involved in. These factors have played a major part in determining the key practitioners who were needed to help deliver those projects' requirements. In terms of their general level of involvement in all types of regeneration projects, the findings from the interviews and questionnaire survey showed that all the key practitioners have had some level of involvement in delivery of the sustainable regeneration projects. The findings from the interviews revealed that clients' representatives and architects were the most frequently (always/very often) involved practitioners during the early stages of the projects. The questionnaire survey findings on the other hand, revealed that clients' representatives, commercial managers and architects were the most frequently involved practitioners during the early stages of the projects. It was further observed from the interview findings that, clients' representatives' frequent levels of involvement were consistent throughout the three main delivery stages of the projects. The frequent and early involvement of clients' representatives, architects and commercial managers was attributed to their particular roles and responsibilities in making sure that planning and preparation of the projects achieves certain specific objectives for the clients. A further observation also made from the findings in relation to the early stage of involvement, suggested that the delivery of many regeneration projects were/are still following the traditional projects' delivery and management methods in which architects and clients' representatives are largely seen as key practitioners and tend to play leading roles during a project's early delivery stages, as evident in both the interview and questionnaire survey findings of this study.

The findings from the interviews and questionnaire survey also indicated that practitioners who have sustainability assigned to their roles and responsibilities (regeneration managers, sustainability managers, training/CSR managers) were the least frequently involved in all the three delivery stages of the projects. Their low level of involvement was also consistent throughout the three main delivery stages of the projects. Their low level of involvement was

assumed to be because sustainability issues were not seen as the main priorities and considerations for the projects by most of their clients and their construction organisations.

One other reason attributed to the varied frequency of levels of practitioners' involvement, was the nature and types of current building contracts employed to procure and deliver sustainable regeneration projects. The author was of the view that the emphasis and wording of the current building contracts such as the JCT and NEC were too limited to the contractual relationships between the client and the contractor. Therefore the author recommended a review of their contents to reflect the issues that affect the frequency of the level of involvement of key practitioners in the delivery of sustainable regeneration projects. Adopting such an approach, the author believes could help to ensure practitioners frequent (always/very often) level of involvement in the delivery of sustainable regeneration projects. It is also recommended that the review of such building contracts should ensure higher levels of involvement of key practitioners, with assigned sustainability roles (regeneration managers, sustainability managers, and training/CSR managers) to oversee their core responsibilities as outlined in section 4.3, in the delivery of the sustainability aspects of the projects.

In terms of practitioners' levels of involvement in the types of sustainable regeneration projects, the findings from both the interviews and questionnaire survey have highlighted that housing-led regeneration projects was the type of regeneration projects the majority of practitioners were most frequently involved in delivering, while the least involved project was the private sector commercial regeneration projects. Their frequency of level of involvement in housing-led regeneration was attributed to the fact that housing was the predominant regeneration project practitioners' organisations were involved in. In addition, the UK government's regeneration policy, leading to heavy investment in social housing projects has also been seen to have played a significant part in this phenomenon.

It was suggested that the frequency of the level at which practitioners were involved in delivering sustainable regeneration projects could have a significant impact on practitioners' knowledge and understanding of the socio-economic sustainability requirements of regeneration projects. The author also believes that the knowledge and expertise acquired through the delivery of these types of regeneration projects could be used to advise their organisations, policy makers and potential clients for future regeneration projects. Finally, it was observed that there have been a number of studies carried out on practitioners' levels of

involvement in the delivery of sustainable construction projects in general, however, none of these studies were focused on sustainable regeneration projects. Similarly, no study has also been conducted on practitioners' levels of involvement in the delivery of the three main types of sustainable regeneration projects. Therefore, it is recommends that a further study be carried out to explore in more depth, the key practitioners' levels of involvement at the three main delivery stages of sustainable regeneration projects and the types of sustainable regeneration projects. The next Chapter presents the data analysis and discussion on organisational social and economic sustainability drivers for sustainable regeneration projects in UK.

CHAPTER 5 THE ORGANISATIONAL SOCIAL AND ECONOMIC SUSTAINABILITY DRIVERS FOR SUSTAINABLE REGENERATION PROJECTS IN THE UK

5.1 Introduction

This Chapter presents the analysis and discussion on eight social and economic sustainability drivers identified to be driving practitioners to adopt and implement social and economic sustainability principles in their regeneration projects in the UK. It starts by providing a brief background literature which is followed by the initial analysis of the semi-structured interview results obtained from the 21 practitioners who participated in the interview phase of the study. It also presents the initial analysis of the questionnaire survey results obtained from the 193 practitioners who participated in the questionnaire survey phase of the study. It then goes on to provide the detailed analyses, discussions and findings of the semi-structured interviews, alongside the questionnaire survey for each driver. The Chapter also presents the analysis and findings from the Spearman's correlation test of the top three drivers obtained through the analysis of the questionnaire survey. It finally presents the summary of the findings for the Chapter.

5.2 Drivers of Socio-economic Sustainability of Regeneration Projects

The construction industry has been seen as a major driving force towards the delivery of the UK infrastructural and sustainable development agenda (DBIS, 2013; DBERR, 2008). The UK government's strategy to deliver sustainability objectives set the agenda and challenged the construction industry practitioners to drive their practices towards the achievement of the sustainability objectives of their projects (DBIS, 2013). It has been argued that the requirement to deliver such sustainability objectives has a strong correlation with the attitude and practices adopted by practitioners.

Different construction industry practitioners currently delivering sustainable regeneration projects are seen to be adopting and implementing the social and economic sustainability principles based on their individual understanding, perceptions and interests (Evans and Jones, 2008). It has been acknowledged that a significant number of regeneration initiatives which have been formulated to deliver regeneration projects over the years have been driven based on practitioners' priorities for the projects. Adopting such practices, according to Evans and Jones (2008) and Sorrell and Holti (2007), has undermined many sustainable regeneration

initiatives from achieving their desired sustainability objectives. Similarly, the over reliance on environmental drivers has also played a significant part in limiting the integration of social and economic sustainability principles into the mainstream practices of practitioners. Accordingly, the delivery of sustainable regeneration requires a level of sustainability practices beyond the focus on the current drivers towards the consideration and delivery of social and economic sustainability principles of the projects. To achieve this goal means that, practitioners will have to move away from their current practices of delivering regeneration projects to a more modernised one that enables projects to deliver their social and economic sustainability objectives.

It is suggested that social and economic principles are deeply rooted in our community set up, and for that reason, focusing on their drivers has enormous potential to drive regeneration projects towards the attainment of their sustainability objectives. The growing demands on national and local governments to meet the sustainability needs of society through sustainable regeneration initiatives, particularly for deprived communities, makes the call for the delivery of socio-economic regeneration timely. It is believed that meeting society's social and economic requirements is one major means by which society can become truly vibrant and sustainable (EPH, 2008). Hence, the pursuit of sustainable regeneration calls for a fundamental change of perspective towards the adoption and implementation of socio-economic sustainability drivers that make the projects wholly sustainable.

It is also argued that social change can be the determinant of economic change, in that many of the social features of sustainability co-exist with the economic features of sustainability in regeneration (EPH, 2008). The principles underpinning the social and economic sustainability requirements seek to provide collaboration between individuals' social progress and economic prosperity, which are in-tune with the sustainable regeneration agenda. In a series of stakeholder consultation events reported in CLG (2008), the majority of the participants' suggested that the socio-economic sustainability objectives should be seen as key drivers for sustainable regeneration outcomes. The participants entreated practitioners' of regeneration to pay greater attention to the principles that relate to the socio-economic sustainability objectives of their regeneration projects. It is believed that if future regeneration project are to make a greater sustainable impact on communities, then the current regeneration projects' priorities and drivers will have to be altered to meet the socio-economic sustainability needs of these communities in a holistic manner (Raco and Henderson, 2009). It has been suggested

that a regeneration project which is centered on the social and economic well-being of the people is more likely to deliver tangible sustainable benefits (Haran *et al.*, 2011; CLG, 2008).

Consequently, given the above discourse, a study was undertaken to explore the important socio-economic sustainability drivers that underpin the current delivery of sustainable regeneration projects in the UK. The results and analysis of the semi-structured interviews and questionnaire survey study are discussed in the subsequent sections of this Chapter. In an attempt to ascertain the important socio-economic sustainability drivers that drive practitioners to adopt and implement socio-economic sustainability principles in their regeneration projects, the present study collected data from twenty-one (21) practitioners (Table 3.4) and questionnaire survey data from 193 respondents (practitioners) from the field.

From the semi-structured interviews, all the twenty-one (21) practitioners presented their views on the eight (8) drivers put to them. However, it emerged from the initial analysis of the interviews, that there were multiple responses to the (8) drivers, by practitioners. The initial analysis of the semi-structured interview results in Table 5.1 has shown that all the 21 (100%) practitioners who were interviewed have unanimously cited 'enhancement of reputation' as a driver for pursuing the socio-economic sustainability principle on their regeneration projects. 16 (76%) practitioners have indicated that 'competitive advantage' was the main driver for their organisations, while 15 (71%) practitioners have cited 'clients' requirements'. Also, 13 (62%) practitioners have indicated that 'corporate social responsibility' was their main driver. Nearly half of the practitioners interviewed, 10 (48%) have cited 'stakeholders demand' as the main driver, while 8 (38%) practitioners have cited 'ethical and moral obligation' as the main driver influencing their organisations to adopt and implement socio-economic sustainability on their projects. Similarly, 7 (33%) practitioners have cited 'commitment to sustainability objectives' as the main driver. However, only 5 (24%) practitioners have cited 'legislation and legal requirement' as their driver for adopting and implementing socio-economic sustainability on their sustainable regeneration projects.

Table 5.1: Semi-structured interview results of the socio-economic sustainability drivers

Drivers	Rank (based on no. of response)	ORGANISATION Total N = 21	
		No. of Response	Percentage (%) Response
Enhancement of reputation as a 'sustainable' organisation (ERSO)	1	21	100%
Competitive advantage (CA)	2	16	76%
Clients requirements (CR)	3	15	71%
Corporate social responsibility (CSR)	4	13	62%
Stakeholders demands (SD)	5	10	48%
Ethical and moral obligation (EMO)	6	8	38%
Commitment to sustainability objectives (CSO)	7	7	33%
Legislation and legal requirement (LLR)	8	5	24%

The questionnaire survey data was also collected from 193 practitioners who participated in the study. Table 5.2 presents the results that emerged from the initial analysis of the questionnaire survey. In terms of the questionnaire survey results, (Table 5.2), 87% of the practitioners who participated in the study either ranked 'enhancement of reputation' as a very important or important driver, compared to 9.3% who have either ranked it as fairly important or a slightly important driver. Over 85% of the practitioners either ranked 'competitive advantage' as a very important or important driver, compared to only 11.9% who either ranked it as a fairly important or slightly important driver. In the case of 'client requirement' 63.2% of practitioners either ranked it as a very important or important driver, compared to 35.2% who have either ranked it as a fairly important or slightly important driver. Also, over 52% of practitioners either ranked 'corporate social responsibility' as a very important or important driver, compared to 46% who have also either ranked it as a fairly important or slightly important driver. The questionnaire survey results (Table 5.2) further suggested that over 50% of practitioners either ranked 'commitment to sustainability objectives' as a very important or important driver, compared to 48.2% who have either ranked it as a fairly important or slightly important driver. It also emerged that 48.7% of practitioners either ranked 'ethical and moral obligation' as a very important or important driver, compared to 47.7% who have also either ranked it as a fairly important or slightly important driver. Additionally, over 50% of practitioners also either ranked 'stakeholders demand' as a very important or important driver, compared to 46.7% who have either ranked it as a fairly

important or slightly important driver. Finally, for ‘legislation and legal requirement’ it can be observed that 51.3% of practitioners either ranked it as a very important or important driver, compared to 32.2% who have also either ranked it as a fairly important or slightly important driver.

Table 5.2: Questionnaire survey results of the socio-economic sustainability drivers

Drivers (Percentage)	Mean scores	Ranks	Very important	Important	Fairly important	Slightly important	Not important at all
Enhancement of reputation as a 'sustainable' organisation (ERSO)	1.74	1	49.7%	37.3%	6.2%	3.1%	3.6%
Competitive advantage (CA)	1.88	2	38.3%	47.2%	5.7%	6.2%	2.6%
Clients requirements (CR)	2.24	3	25.4%	37.8%	25.9%	9.3%	1.6%
Corporate social responsibility (CSR)	2.44	4	21.2%	31.1%	31.6%	14.5%	1.6%
Commitment to sustainability objectives (CSO)	2.55	5	20.7%	29.5%	24.9%	23.3%	1.6%
Ethical and moral obligation (EMO)	2.61	6	20.7%	28.0%	24.9%	22.8%	3.6%
Stakeholders demands (SD)	2.67	7	19.2%	31.1%	16.1%	30.6%	3.1%
Legislation and legal requirement (LLR)	2.76	8	25.9%	25.4%	10.4%	21.8%	16.5%

5.3 Enhancement of Reputation as a ‘Sustainable’ Organisation

The potential for regeneration projects to generate socio-economic sustainability benefits has long been recognised. The principle of sustainability presents the practitioners with opportunities to promote sustainability principles through the delivery of sustainable regeneration projects. The delivery of successful sustainable regeneration projects ultimately relies on the sustainability principles that are adopted and implemented by practitioners who are involved in the delivery of such regeneration projects. The present study presents the results and analysis on the social and economic sustainability principles that are driving practitioners in the delivery of their sustainable regeneration projects in the UK.

From the examination of the results in Table 5.1, it can be observed that all the practitioners unanimously indicated that enhancement of reputation was a driver for them to adopt and implement socio-economic sustainability principles on their sustainable regeneration projects.

All the twenty one (21) (100%) practitioners who took part in the semi-structured interviews, were of the view that enhancing their reputation was a major driving factor for their organisations to pursue socio-economic sustainability principles on regeneration projects. This became obvious when the author sought to find out from practitioners during the interviews about the sustainability principles that were driving the adoption and implementation of socio-economic sustainability principles on their regeneration projects. A typical response given by one of the practitioners was:

…For us, adopting sustainability helps to enhance our reputation as a sustainable organisation. It makes us more appealing to future clients. …They know that we will be able to fulfil the promises that we make when we tender for work.

In line with the above view, another practitioner commented by saying:

…Obviously, as an organisation, taking on sustainability enables us to build our brand and reputation as an organisation. We are seen as the best company of choice and we get more recognised as the provider of best practice in terms of sustainability and that gives us a real advantage over our competitors.

All the practitioners strongly believed that adopting the principles of sustainability by their organisations was the best way of building up their organisations' reputations, which was vital for them to continue to appeal to their potential future clients. The literature review on sustainability provides a range of empirical evidence that corroborated these results. This finding also reinforces the findings obtained from the literature review in Chapter 2. The works of authors like Cheng *et al.* (2014); Turcsanyi and Sisaye (2013); Okoro (2012); Kraus and Britzelmaier (2012); Smith and Sharicz (2011); Anvuur, *et al*. (2011); Drews (2010); Pitt *et al*. (2009); Demacarty (2009), have argued that the majority of organisations were adopting and implementing sustainability principles as a means of improving their reputations, for them to remain in business for a long time.

To complement the above findings, a questionnaire survey was conducted with 193 practitioners. The results of the questionnaire survey are presented in Table 5.2. Interestingly, from the results, of the 193 practitioners who participated in the questionnaire survey phase of the study, nearly 50% have responded that enhancing their reputations was a driver for them,

compared to only 3.6% who did not consider it at all as a driver for them to adopt and implement socio-economic sustainability principles on their projects. Furthermore, the results in Table 5.2 also suggests that 87% of practitioners either consider enhancing their reputation as very important or important, compared to only 9.4% who either consider it as a fairly important or slightly important driver for them to adopt and implement socio-economic sustainability principles on their regeneration projects. Comparing both results in terms of their very important/important responses, it can be said that the questionnaire survey result has corroborated the semi-structured interviews result.

From the findings (Tables 5.1 and 5.2), it can be suggested that all, or at least, the majority of practitioners who are currently delivering sustainable regeneration projects, believed that there is a good business case for their organisations to adopt and implement social and economic sustainability principles on their projects. They believed that getting such 'image branding' is the best way to continue to appeal to their potential clients as a 'sustainable organisation'. This belief is premised on the fact that, currently, most of the local and national governments' contracts are being awarded to organisations that are seen to be delivering such sustainability benefits for communities. Hence, from the above findings, it can also be inferred that the majority of these practitioners may only be pursuing sustainability principles to enable them to be branded as 'sustainable organisations', to enable them to attract and win more contracts.

However, such motives could result in serious negative implications for the successful delivery of the sustainability of the projects because, while such practitioners' organisations may be seen to be 'sustainable organisations', their objectives may be different from what the projects' sustainability objectives may be in terms of regeneration. Hence, practitioners who may be involved in the delivery of such sustainable regeneration projects may only be superficially be adopting and implementing the socio-economic sustainability principles, while in a real sense, they may be projecting their own interests and objectives.

Many of the misunderstandings associated with the current adoption and implementation of sustainability principles for regeneration projects can be seen as the direct product of practitioners' interests and prioritisation of sustainability benefits for their organisations. Such vested interests and approaches have contributed considerably to the difficulties inherent in the current practices and delivery of socio-economic sustainability of regeneration projects. A

recent study conducted by Häkkinen and Belloni (2011) also found a linkage between the practitioners' drive to pursue sustainability issues and the potential resulting outcomes for their organisations. This view also agrees with the views of Okoro (2012) and DBERR (2008), in which they argued that enhancing reputation was what most organisations were capitalising on to enable them to pursue their business ambitions. However, it is suggested that 'organisations which have a reputation for trading fairly', and respecting and protecting the interests of other stakeholders, are more likely to attract public services and support for their activities (DETR, 2000: 14).

5.4 Competitive Advantage

The quest for many construction organisations to adopt and implement sustainability principles on their regeneration projects can be dictated by the notion of obtaining competitive advantage over their competitors. According to Okoro (2012), gaining such competitive advantage presents one major means by which corporate organisations can continue to receive recognition over their main competitors. It is suggested, for example, that, the provision of certain key services seen to be over and above the services provided by other organisations, has the potential to offer a competitive edge to such organisations providing those key services. Similarly, integrating the sustainability principles, such as corporate social responsibility, in the organisation's strategies and practices, can also enable such organisation to gain competitive advantage and to continue to win more contracts from its potential clients. Hence, going with the notion and objective of gaining competitive advantage can have an impact on practitioners' practices towards the adoption and implementation of social and economic sustainability principles for their regeneration projects.

From the semi-structured interview results in Table 5.1, 16 (76%) of the 21 practitioners believed that adopting socio-economic sustainability factors was one major means for their organisations to gain a competitive advantage over their competitors in the market place. Considering the current economic climate, it will not be out of place to also assume that the majority of practitioners' organisations will be attempting to integrate sustainability objectives into their business practices, to enable them to gain competitive advantage over their compatriots in the market place, to stand a better chance of winning future work from their clients. This point was highlighted by one of the practitioners by saying:

...Seeing our organisation to be delivering socio-economic sustainability benefits, gives us a real potential advantage over our competitors, especially looking at the current situation we are in now, because we know exactly how it works, how much it costs and how the value is to us and our clients.

The above comment was also echoed by another practitioner by saying:

...From the business point of view, and with the current economic climate, it definitely gives us advantage over our competitors who are not taking advantage of it.

A review of the questionnaire survey results in Table 5.2, shows that of the 193 practitioners who participated in the questionnaire survey phase of the study, over 38% of them were of the view that gaining 'competitive advantage' was a very important driver, while only 2.6% of them felt that it was not an important driver at all for them to adopt and implement socio-economic sustainability principles on their regeneration projects. Additionally, the results in Table 5.2 also suggests that over 85% of practitioners either believed that gaining competitive advantage was very important or important, compared to just 11.9% who believed that it was either a fairly important or slightly important driver for them. From these results, it can be concluded that the very important/important result obtained from the questionnaire survey has confirmed the very important/important result obtained from the semi-structured interviews.

Drawing from the above findings (Tables 5.1 and 5.2), it can be observed that the majority of the current practitioners who are involved in the delivery of sustainable regeneration projects are motivated to adopt and implement sustainability because they believed that by doing so, it will enable them to remain competitive in their market place. Literature on sustainability provides a range of empirical evidence that corroborated these results in which gaining competitive advantage has also been identified as a major driver for most private organisations aligning their social and economic sustainability agenda with their business operations (Henderson, 2011). According to Henderson (2011), the idea of gaining competitive advantage has been more often the goal of private sector practitioners looking to maximise their returns by outperforming their competitors in some key areas of their activities. Other authors like Okoro (2012); Kraus and Britzelmaier (2012); Henderson (2011); Häkkinen and Belloni (2011); de Francesco and Levy (2008); and Lankoski (2008), believed that gaining such a competitive advantage over competitors has being the main

driver behind many of the organisations' attempts to adopt and implement sustainability principles in their business strategies.

However, focusing on obtaining competitive advantage can have long term sustainability implications for the projects. In an attempt to obtain a competitive advantage, practitioners may be tempted to adopt short term practices (cut corners especially during the tender stages) to win over their competitors, and this may potentially result in a long term negative impact on the achievement of the socio-economic sustainability benefits of the projects. Such practices may also lead to concentration on 'winning more contracts' to increase turnover and profit margins for practitioners' organisations. Hence, the need to ensure that practitioners focus on the delivery of the fundamental sustainability principles underlining sustainable regeneration projects, alongside the need to obtain such competitive advantage when delivering the projects. It is argued that it is only when practices that are adopted and implemented are focused on such core sustainability principles, that a number of practical problems associated with the current delivery of socio-economic sustainability of regeneration projects can be overcome (Adamowicz, 2003).

5.5 Clients' Requirements

In the context of adopting and implementing the sustainability concept on regeneration projects, clients and their requirements can play a major role. While clients' requirements are crucial in ensuring that projects which are delivered meet their objectives, clients' requirements can also determine the delivery of other objectives. They can provide a strong driving force behind the approaches and practices adopted and implemented by practitioners. For example, clients who may require their projects to be completed within a certain time frame will require practitioners to meet their time requirements. This will also call for the adoption of and implementation of practices that could lead to practitioners making a trade-off between other clients' requirements, such as cost, quality and sustainability. It has generally been argued that clients' requirements are essential requirements which cannot be ignored by practitioners who have undertaken to deliver on those requirements.

A further analysis of the semi-structured interviews (Table 5.1) reveals that some practitioners were pursuing socio-economic sustainability principles as a way of meeting their clients' requirements for the projects. In Table 5.1, the results obtained indicate that 15 (71%) out of the 21 practitioners, were of the view that the requirements from clients were their main

driver to adopt and implement the socio-economic sustainability factors whenever their organisations were involved in the delivery of sustainable regeneration projects.

The complementary results obtained from the questionnaire survey, when practitioners were presented with a list of eight (8) drivers identified from the review of the literature, has strongly corroborated the semi-structured interview findings obtained above. The questionnaire survey results in Table 5.1 indicate that 25.4% of practitioners responded that 'clients' requirements' was a very important driver, compared to only 1.6% who indicated that it was not a driver for them at all. Also, the results in Table 5.2 further suggest that over 63% of practitioners either consider clients' requirements as a very important or important driver, compared to 35.2% who either consider clients' requirements as a fairly important or slightly important driver for them to adopt and implement socio-economic sustainability principles on their regeneration projects. The over 63% 'very important or important' responses obtained from the questionnaire survey lends support to the 71% responses obtained from practitioners in the semi-structured interviews. It can be said from the findings in Tables 5.1 and 5.2 that a sizeable number of practitioners were/are only adopting socio-economic sustainability factors to meet their clients' requirements, to enable them win the projects. To confirm the above position, one such candid view which was expressed by one of the practitioners during the course of the interview discussion, emphasised this by saying:

…Of course, we've got to prove to the client that we can do what he wants us to do for him to give us the contract. That's how it works. So to be honest, if the client wants us to employ from the locality we deliver that and if we do that then there is a good chance that we are going to get a repeat business from the client.

These findings lend support to the works of Akadiri *et al.* (2012); Kraus and Britzelmaier (2012); and Häkkinen and Belloni (2011), obtained through the review of the literature in Chapter 2. In their works, they sought to suggest that the majority of organisations who were currently found to be practising sustainability principles were doing so because the contracts required them to do so. The current economic crisis, which has resulted in clients requesting greater accountability from practitioners, has also been inferred as a possible reason for these findings. Within the construction industry, for example, clients are the ones who generally initiate, provide the financial resources and also decide what they require from their projects. Hence, their requirements can play a key role in determining the sustainability principles they

require to be adopted and implemented by practitioners involved in the delivery of their projects. Consequently, clients can be instrumental in influencing the practitioners they hire to deliver their projects, to adopt and implement socio-economic sustainability principles on their regeneration projects. However, this can only happen when clients who are undertaking such regeneration projects, understand sustainability issues themselves and are fully aware of the long term benefits to them and their stakeholders. Equally, practitioners who are involved in undertaking the projects, should also be seen not only to be reacting to meeting such clients' requirements, but they should also be prepared to act on practices that they truly believe will enable them to deliver the socio-economic sustainability benefits, regeneration projects are required to deliver. However, this will also require practitioners to be well informed about sustainability factors and practices necessary to enable the delivery of the projects to be carried out in a cost effective manner. In that case, then they will be in a better position to advise their clients to direct their sustainability requirements towards the delivery of socio-economic sustainability of their regeneration projects.

5.6 Corporate Social Responsibility

The promotion of sustainability principles calls for practitioners to fulfil their corporate social responsibility (CSR) obligations. Delivering sustainable regeneration also places an important emphasis on a reasonable distribution of socio-economic sustainability benefits to all the stakeholders concerned, although the primary 'responsibility of a company is generating profits, companies can at the same time contribute to social and environmental objectives, through integrating corporate social responsibility as a strategic investment into their core business strategy' (CECGP, 2001: 4). Therefore, acknowledging the importance of achieving such shared gains calls for a strong commitment to the promotion of stakeholder interests by regeneration practitioners (CLG, 2008). Generally, the performance of sustainable regeneration is demonstrated and defined by the social and economic opportunities created by these projects. The creation of sustainable socio-economic activities can be directed towards the achievement of such socio-economic potentials of all the stakeholders, including the local communities (Mang and Reed, 2012). It is suggested that discharging the requirements of CSR on regeneration projects provides one crucial means of building a regenerated society (EPH, 2008).

As the discussions developed during the interview, it was refreshing to note that some of the practitioners were giving prominence to corporate social responsibility issues as a means of

meeting their organisations' corporate sustainability objectives. It can be observed from the results in Table 5.1, that a good number of practitioners, 13 (62%) of the 21 practitioners, have commented that corporate social responsibility (CSR) was an important driver for adopting and implementing the principles of socio-economic sustainability factors on their regeneration projects.

Equally, the results obtained from the 193 practitioners who responded to the questionnaire survey phase of the study, strongly corroborated the above findings. From the descriptive analysis of the questionnaire survey results obtained in Table 5.2, out of the 193 practitioners who participated in this phase of the study, 21.2% of them responded that 'corporate social responsibility (CSR)' was a very important driver for them, compared to only 1.6% who did not consider CSR as a driver at all for adopting and implementing social and economic sustainability principles on their regeneration projects. Also, the results in Table 5.2 further suggest that over 52% of practitioners consider 'CSR' to be either a very important or important driver, compared to 46.1% who either consider CSR to be a fairly important or slightly important driver towards the adoption and implementation of the socio-economic sustainability principles on the regeneration projects.

Both the findings obtained from semi-structured interviews (62%) in Table 5.1 and the corresponding questionnaire survey findings (over 52% 'very important or important') in Table 5.2, show a good indication of practitioners' willingness to adopt and implement social and economic sustainability principles on their regeneration projects. Apparently, the findings obtained in Tables 5.1 and 5.2 also support the views of Pitt *et al*. (2009) and Colantonio (2008). In their works, they argued that the organisations who were committed to promoting sustainability practices were adopting CSR as a way of achieving their sustainability objectives. Many such organisations were not only mentioning sustainability principles in their mission statements on their websites, but were genuinely giving greater attention to sustainability issues, by adopting and implementing the socio-economic sustainability principles through the creation of jobs and other skill development programmes. It is believed that these organisations which are seen to be genuinely adopting such CSR principles will also stand a better chance of their businesses remaining sustainable and improving their economic performance and growth over a long period of time (Shen *et al*., 2010). This position was shared by one of the practitioners during the interview by saying:

…I think it's a win-win kind of thing really. As we help to provide these local jobs and all kinds of skills training schemes for young people, the long term benefit for us is that, it keeps us in business. …And that also helps our long term economic growth as well.

These findings are also consistent with the works of Häkkinen and Belloni (2011) and Lankoski (2008). In their works, they pointed out that the organisations which are genuinely committed to promoting the shared goals and benefits of sustainability principles were more likely to remain relevant, increase their turnover and achieve long term economic growth. A subsequent work by Turcsanyi and Sisaye (2013) also agreed to the above works and findings by indicating that the economic performance of organisations can be well sustained when such organisations integrate CSR into the business plans and when they are genuinely adopting and applying its principles on their projects.

5.7 Stakeholders' Demands

The quest to adopt and implement sustainability practices on sustainable regeneration projects can also be dictated by demands from stakeholders. Seen as key drivers towards the adoption and implementation of sustainability, are the major stakeholders who determine the sustainability approaches to be adopted and implemented in the projects (Pitt *et al.,* 2009). It has been suggested that many sustainable regeneration projects that have been planned and delivered in the UK, have had such demands from stakeholders (CLG, 2008). Their demands have determined the socio-economic sustainability benefits that were adopted and implemented by practitioners to deliver the projects. According to Lankoski (2008), demands from stakeholders play a major role in dictating the adoption of issues that relate to sustainability within an organisation. Hence, in recognition of the impacts stakeholders' demands have on practitioners' ability to adopt and implement the principles of socio-economic sustainability on their projects, the present study also sought the views of practitioners. A critical examination of the semi-structured interviews in Table 5.1 has shown that out of the 21 practitioners who took part in the semi-structured interviews, 10 (48%) of them held the opinion that demand from stakeholders was the key driver for their organisations to adopt and implement the socio-economic sustainability principles on their regeneration projects. This was evident when the following question was put to them: "Do you consider the demands from your stakeholders as a driver for your organisation to adopt and implement socio-economic sustainability factors in your regeneration projects?''. In a response to the above question, one of the practitioners for instance commented by saying:

…Absolutely, yes we do. It has always played a major part in our decision to promote sustainability on our regeneration projects. ….Their demands determine what social and economic sustainability factors we take or we can take on for a particular project. If our funders for example want us to take on local labour on the project, we go with their demand.

In terms of the questionnaire survey results (Table 5.2), of the 193 practitioners who participated in the questionnaire survey, 19.2% responded that the demands from stakeholders was a very important driver, compared to only 3.6% who did not consider it as an important driver at all. The results in Table 5.2 also suggest that over 50% of practitioners consider the demands from stakeholders to be either a very important or important driver, compared to 46.7% who either consider stakeholder's demands to be a fairly important or slightly important driver. In comparing the results in Tables 5.1 and 5.2, it can be observed that the 50% 'very important or important' result obtained from the questionnaire survey phase of the study validates the 48% result obtained from the semi-structured interview phase of the study.

Although the number of practitioners who have cited stakeholders' demands as their driver fell short of those who have cited clients' requirements as their driver, it can be said that a significant number of practitioners are still not committed to genuinely pursuing sustainability principles on their own without being asked to do so. Such an approach could partly be responsible for many sustainable regeneration projects in the UK not realising their potential socio-economic sustainability objectives. Authors such as Brandon and Lombardi (2011) and Evans and Jones (2008) have attributed this phenomenon to the lack of understanding of sustainability principles by many practitioners who are presently practising their trades within the construction industry. Therefore practitioners' understanding of sustainability, and particularly socio-economic sustainability, will have to be enhanced to enable them take full advantage of its associated benefits. It is suggested that greater sustainability impacts can be achieved if practitioners recognise the potential benefits of pursuing the sustainability agenda to themselves and to their stakeholders and accordingly, respond to such demands (SDC, 2008).

5.8 Ethical and Moral Obligation

The principles underpinning the delivery of socio-economic sustainability for regeneration projects aim to promote a common goal between regeneration practitioners and their beneficiaries. It is also said that ethical and moral reasons can serve as a driver for

practitioners to adopt and implement sustainability principles on their sustainable regeneration projects. Significant progress towards the delivery of sustainable regeneration can be achieved when practitioners are inclined to discharge such ethical and moral obligations towards the adoption and implementation of the sustainability concept on their projects. The United Nations, for instance, has underscored the need for organisations to pursue such ethical and moral obligations in the discharge of the sustainable development goals for the communities (United Nations, 2010). Many construction organisations who are currently involved in the delivery of sustainable regeneration are being called upon to contribute their quota to the development of the communities in which they operate. They are being urged to look beyond the conventional profit oriented approach often adopted by organisations towards a more generous one, which is aimed at investing in other equally important things on which their organisations' survival also depend. From the perspective of delivering sustainable regeneration projects, it means that the sustainability practices of construction organisations should be inclined towards the delivery of a wide range of socio-economic sustainability benefits for communities in which the projects are located. Doing so, also implies that they are contributing to the enhancement of the communities, while in the same vein discharging their ethical and moral responsibilities towards such communities.

The views obtained from practitioners through the semi-structured interview in Table 5.1 have shown that some practitioners were being driven by ethical and moral consideration to adopt and implement social and economic sustainability factors on their sustainable regeneration projects. This was evident as 8 (38%) of the 21 practitioners (Table 5.1) indicated that discharging their ethical and moral obligations was a driver for them to adopt and implement socio-economic sustainability factors on their sustainable regeneration projects. Contributing to the discussion during the interview, one practitioner outlined his organisation's ethical and moral responsibilities by saying:

…As regeneration practitioners, we hold it as an obligation to give something back to the community where we operate. …We do this by providing supports and services to individuals and communities in areas where we work, and that's how we discharge our ethical and moral obligations as practitioners to society.

To support the above semi-structured interview findings, a questionnaire survey was also conducted with 193 practitioners. The results in Table 5.2 show that 20.7% of the

practitioners who participated in the questionnaire survey have indicated that 'ethical and moral obligations' was a very important driver, while only 3.6% have responded that it was not an important driver for them at all. Furthermore, the results (Table 5.2) suggest that 48.7% of practitioners were either of the view that 'ethical and moral obligations' was a very important or important driver, compared to 47.7% who either considered it as fairly important or slightly important. However, the 'very important or important' questionnaire survey result obtained (48.7%) did not seem to support the 'very important or important' result (38%) obtained from the semi-structured interviews. The reason could possibly be due to the variation in the size of data from which both analyses were conducted.

The result falls short of the author's expectations, as all the practitioners who took part particularly in the interview, have indicated that delivering sustainability benefits for communities was a good thing to do. The literature review in Chapter 2 has revealed that many practitioners who advocate sustainability principles find it very difficult to put them into practice (Van Bueren and De Jong, 2007). However, the very important or important (48.7%) response obtained from practitioners in the questionnaire survey, provides a good indication that some practitioners are focusing their efforts on contributing to the sustainability of communities in which they are working.

It is often the case for many commercially minded organisations to focus on commercial aspects and, hence, tend to neglect their ethical and moral obligations which enjoin them to adopt and implement the socio-economic sustainability factors on their projects (Rickey and Houghton, 2009). The principles underlying the socio-economic sustainability requirements for sustainable regeneration projects require that practitioners deliver the projects in a manner that promotes society's social and economic prosperity. Pursuing such objectives calls for the adoption and implementation of socio-economic sustainability practices which enable opportunities to be created to enhance the social and economic conditions of society. For example, by adopting sustainability principles to promote job opportunities, etc, then that organisation can be seen to be discharging its corporate ethical and moral obligations for society (Mason and Simmons, 2014; Okoro, 2012; Martinuzzi *et al.*, 2011; EPH, 2008; ODPM, 2006). Equally, there are also benefits for practitioners' organisations as well. According to CLG (2008), organisations that are mindful of their ethical and moral obligation towards society are more likely to win the support of that society. Discharging such ethical and moral obligations by delivering a range of socio-economic sustainability benefits for

communities, Turcsanyi and Sisaye, (2013) and Pitt *et al.* (2009), believed can also lead to a long term improvement of the overall economic fortune of organisations.

5.9 Commitment to Sustainability Objectives

Of crucial importance for adopting and implementing socio-economic sustainability on sustainable regeneration projects is the attitude and commitment required from practitioners. The quest to fully embrace the sustainability principles requires from practitioners to fully commit themselves to sustainability principles. Generally, the performance of sustainable regeneration projects is demonstrated through the interest and commitment which is attached to the sustainability deliverables by practitioners who are involved in the delivery of the project.

Without such commitment, it would be very difficult, if not impossible to genuinely and effectively adopt and implement the core principles of sustainability in any particular regeneration project, to realise its potential benefits. It is widely argued that commitment from the top management of an organisation can be a major driving force towards the adoption of sustainability into an organisation's practices. For sustainable regeneration, such commitment requires that practitioners commit their efforts and resources in a manner that transcend the commitment usually given to the delivery of traditional construction projects. With the right attitude and commitment, practitioners will be able to prioritise the key social and economic sustainability deliverables beyond any other consideration or constraints associated with the project. It is believed that regeneration projects, for instance, would achieve greater sustainable impacts when genuine commitment is obtained from the top management of construction organisations, and when they are truly committed to championing its core principles on the projects.

In most cases, the commitment to adopt and implement sustainability principles on sustainable regeneration projects has largely being influenced by the cost perception which is usually associated with sustainability (Pitt *et al.*, 2009). This perception to a very large extent, has undermined practitioners' drive to fully adopt and implement sustainability factors on their regeneration projects. Apparently, this cost perception can also be seen to have been exacerbated by the present economic conditions whereby most construction organisations, and particularly the small to medium ones, are finding it difficult to cope financially. In that regard, their commitment to promoting sustainability practices is likely to be geared towards

their economic survival, and hence, relegating any issues relating to sustainability to the background. It is suggested that sustainable regeneration projects can only realised their full socio-economic sustainability impacts when practitioners who are considered as key stakeholders in their delivery, demonstrate adequate commitment to fully embrace the sustainability principles (CLG, 2008).

From the semi-structured interview in Table 5.1, it was discovered that out of the twenty-one (21) who were interviewed for the present study, surprisingly, only 7 (33%) practitioners have cited commitment as a driver for their organisations to adopt and implement socio-economic sustainability on their regeneration projects. Although this result seems not to be encouraging, it is refreshing to note that at least one-third of the practitioners who were interviewed, are being driven by commitment to adopt and implement socio-economic sustainability on their projects. A comment made by one practitioner during the interview discussion, when asked about the main drivers that were influencing their organisation to adopt and implement social and economic sustainability on their projects was:

…We see it as part of our commitment to provide services on our projects that will benefit the community socially and economically. We pretty much take on apprentices on our regeneration projects and provide young people with jobs and skills for the future. These are some of the things we always try to do. …As organisation, we are very much committed to all our sustainability responsibilities to the communities, because we think that's the right thing to do.

The present study also obtained data through a questionnaire survey to complement the findings obtained from the semi-structured interviews with the 21 practitioners. To this end, views were sought from the 193 practitioners who took part in the questionnaire survey phase of the study. The results obtained (Table 5.2) show that of the 193 practitioners, 20.7% have indicated that 'commitment to sustainability objectives' was a very important driver, compared to only 1.6% of them who did not consider it as an important driver at all towards the adoption and implementation of socio-economic sustainability factors in their projects. Similarly, the findings in Table 5.2 also suggest that a little of over 50% of practitioners either consider the 'commitment to sustainability objectives' as a very important or important driver, compared to about 48% who either consider it as a fairly important or slightly important driver towards the adoption and implementation of socio-economic sustainability

on their projects. The ‘very important or important’ result (50.20%) from the questionnaire survey did not lend support to the ‘very important or important’ result (33%) obtained from the interviews. Again, the difference could also be as a result of the population from which both data was taken.

The findings as per Table 5.1 and 5.2 are in line with findings from the literature review, in which it was suggested that the issues relating to commitment was one of the drivers which was influencing some of the practitioners to promote sustainability practices on their projects (Turcsanyi and Sisaye, 2013; Smith and Sharicz. 2011; Häkkinen and Belloni, 2011). The over 50%, very important or important result obtained from the analysis of the questionnaire survey can be observed to be higher and more encouraging than the result obtained from the semi-structured interview (33%). However, this notwithstanding, it can be highlighted that both results (Tables 5.1 and 5.2) show a positive sign towards a greater commitment for sustainability practices for future regeneration projects.

It can be assumed that the lack of adequate commitment demonstrated in both results could be due to the conventional way successes of an organisations’ performance are assessed. Generally, organisations are seen to be successful when they have made enough profits from their business practices. Hence, many such practitioners who want to be seen as ‘successful’, will be more inclined to adopt and implement practices that will enable them make profits for their organisations. Similarly, it can also be inferred that the perceived cost of sustainability has also influenced and determined the commitment levels of practitioners in their quest to adopt and implement socio-economic sustainability factors on the regeneration projects. This position supports the work of Presley and Meade (2010), in which it was observed that the commitment and attitude of practitioners towards sustainability principle was a direct product of the entrenched financial bottom-line practices of their organisations. However, it is believed that if such profit-oriented and the perceived cost of sustainability issues are not addressed in a decisive and timely manner, they are likely to have serious implications on practitioners’ commitments towards the successful delivery of future regeneration projects. Authors like Smith and Sharicz (2011) have admonished organisations, not to only take into account the profit-oriented practices of their operations, but adopt and implement practices that help to deliver the core principles of sustainability for the projects. It is widely said that the potential for any sustainable regeneration project to deliver a broad range of socio-

economic benefits will be elusive if practitioners limit their commitments to cost and profit related issues of the projects (Häkkinen and Belloni, 2011).

5.10 Legislation and Legal Requirement

Previous studies have shown that regulation through legislation has the potential to drive a construction project's sustainability agenda (Häkkinen and Belloni, 2011). According to Häkkinen and Belloni (2011: 241), sustainability 'can also be promoted at least to a certain extent with the help of regulations'. Legislation and legal requirements can form a crucial part towards the promotion of sustainability aspects on sustainable regeneration projects by practitioners (Pitt *et al*., 2009). They are fundamental for establishing and driving the requirements that are necessary for a greater achievement of sustainability objectives on projects. Meeting such legislation and legal requirements can be considered as a means by which practitioners can be urged or compelled to adopt and implement sustainability on their projects, because without such legislative requirements to regulate the practices of practitioners, there is likelihood that practitioners will follow practices that fit within their own agenda. In the UK, for instance, such legislation and legal requirements have been employed to promote and drive the green agenda within the construction industry (CLG, 2008). Their introduction has compelled many practitioners to pursue sustainability practices that will enable them deliver the green requirements for their projects.

Seeking to deliver sustainable regeneration objectives, legislation and legal requirements can generally be considered as important and significant driver towards the adoption and implementation of socio-economic sustainability deliverables in regeneration projects. For example, by ensuring that the design and delivery of sustainable regeneration projects meet certain sustainability legislation and legal requirements, practitioners will be compelled to adopt and implement sustainability practices that will enable them to meet such requirements. Not only that, legislation and legal requirements will also serve as a driving force through which practitioners can achieve higher performance standards of the socio-economic sustainability aspects of their sustainable regeneration projects.

The results obtained from semi-structured interviews (Table 5.1) in relation to the aforementioned driver show that out of the 21 practitioners (interviewees) who participated in the interview, only 5 (24%) were found to be driven by legislation and legal requirements to adopt and implement socio-economic sustainability factors in their regeneration projects.

Some of them were of the view that meeting legislation and legal requirements was the best way to continue to attract the attention of the authorities. For example, one such practitioner who held that view indicated this by saying:

…Obviously, legislation and legal requirements plays a major part in what we do on our regeneration project. …Because we have to comply with procurement laws, health and safety regulations and others set by the local government, particularly in the areas we work to meet their socio-economic sustainability requirements of the projects. That helps us to attract their attention for future works.

The practitioners who participated in the questionnaire survey phase of the study were also asked to rank their opinions on 'legislation and legal requirements' driver among other drivers presented to them. As per Table 5.2, it can be seen that out of the 193 practitioners who took part in the questionnaire survey study, 25.9% responded that 'legislation and legal requirements' was a very important driver, compared to 16.5% who indicated that it was not a driver for them at all to adopt and implement the socio-economic sustainability factors in their regeneration projects. Additionally, the result in Table 5.2, also suggests that over 51% of practitioners either consider 'legislation and legal requirements' as a very important or important driver, compared to 32.2% who either consider 'legislation and legal requirements' as a fairly important or slightly important driver. Considering the number of practitioners, 5 (24%) out of 21 (Table 5.1) who have cited 'legislation and legal requirements' as a driver, and the 25.9%, (Table 5.2) who considered it as 'very important', it can be said that a significant number of practitioners are not being driven by 'legislation and legal requirements' to adopt and implement socio-economic sustainability factors in their regeneration projects. However, in comparing the over 51% 'very important or important' results obtained in Table 5.2, to that of 24% obtained in Table 5.2, it can be argued that a significant number of practitioners who participated in the questionnaire are driven by 'legislation and legal requirements' compared to the practitioner who took part in the semi-structured interviews. The difference can be attributed to the size of the sample from which the data and analysis was conducted.

It can also be inferred that the practitioners who are driven by legislation and legal requirements are simply adopting and implementing sustainability factors in their projects to

meet certain ‘green construction’ requirements and regulations set out for the projects by the ‘awarding’ bodies, to enable them win future work from such bodies.

However, with the findings obtained above in relation to other drivers, it can be argued that the absence of ‘legislation and legal requirements’ to drive practitioners towards the adoption and implementation of socio-economic sustainability outcomes can have an implication for the delivery of successful sustainable regeneration projects. Evidence from the literature review has shown that construction projects can be delivered well when there are legislation and guidelines in place to direct practitioners (Häkkinen and Belloni, 2011; Pitt *et al*., 2009; Bennett and Crudgington, 2003). For example, the introduction of health and safety requirements and regulations within the practices of the UK construction industry has had a profound impact on reducing accidents on many construction projects. According to Littig and Grießler (2005), the current problems associated with conceptualising sustainability factors for any particular project are partly due to the fact that there is no legislative and legal framework to help conceptualise sustainability factors into the projects. In that regard, practitioners then tend to prioritise sustainability factors that suit their interests and objectives. It has been said that the manner in which sustainability issues are being conceptualised on many projects by practitioners hinders sustainability ‘from being standard industry practice’ (Matar *et al.,* 2008: 263). It is believed that sustainability can be adopted and implemented by practitioners if there are requirements and legislations in place to regulate standards and performance against those requirements and legislations (Häkkinen and Belloni, 2011). Hence, it can be suggested that the successful delivery of social and economic sustainability benefits for any regeneration project will not materialise by itself or by chance, unless it is backed by legislation and legal requirements.

5.11 Correlation Analysis

Spearman’s correlation and Pearson’s moment-product correlation coefficient tests provide the basis for which a more precise evaluation of strength and direction of the association between pairs of variables can be obtained (Nardi, 2006). Their use provides the basis from which an accurate assessment of the level of association between variables can be obtained. Spearman’s rank correlation coefficient is a non-parametric test used to measure the difference in scores ranked on a number of issues by two different respondents (Naoum, 2013), which is determined through the ranks of observation of the variables (Fellows and Liu, 2008). The reason for using this type of statistical test is premised on the condition that

the data collected for the analysis is ordered and not normally distributed (Naoum, 2013). Pearson's moment-product correlation coefficient on the other hand, is a parametric test employed if the researcher is interested in measuring the precise strength of relationship between two sets of scores. It requires data that is normally distributed and measured on an interval or ratio scaled data (Naoum, 2013). Although the approach adopted for Spearman's correlation analysis utilises a different method in its computation, "the resulting coefficient is interpreted in the same way as" Pearson's moment-product correlation coefficient (Saunders *et al.*, 2009: 461). The determination of Spearman's rank coefficient or Pearson's moment-product correlation coefficient ranges from -1 through 0 to +1. A positive relationship is indicated by +1, while a negative relationship is denoted by -1 with the '0' value indicating the absence of any relationship between the variables (Seale, 2005). The closer the coefficient is to 1.0, the stronger the level of association and statistical significance of the association (Nardi, 2006). Naoum (2013) and Saunders *et al.* (2009) recommended this type of test for studies involving analysis of data that is ordered and not normally distributed.

Consequently, in order to determine whether there was any significant level of association between the top three drivers considered by practitioners, a further analysis was carried out using a Spearman's correlation test. These top three drivers were selected for this test on the basis that they were the most considered in terms of the interview and the questionnaire survey results. The data used for the top three drivers (samples) were independently and randomly selected and measured on the same Likert scale. The results as in Table 5.3 indicate a strong, positive and significant correlation between the top three socio-economic sustainability drivers ranked by practitioners. At a significance level of $p < .01$, the output obtained shows statistical significance values for all the top three socio-economic sustainability drivers as 0.000. Hence, it can be concluded that there is a very high and dependable level of association between all the top three socio-economic sustainability drivers ranked by practitioners. Specifically, the results show a significant positive correlation between *'enhancement of reputation as a 'sustainable' organisation'* and '*competitive advantage'* (rho = .435**, p = .000, two-tailed); *'enhancement of reputation as a 'sustainable' organisation'* and '*client requirement'* (rho =. 279**, p = .000, two-tailed) and '*competitive advantage'* and '*client requirement'* (rho = .531**, p = .000, two-tailed). The Partial Eta Square values (0.249, 0.252 and 0.182) (Appendix E) on the other hand, obtained, when compared with the "commonly used guidelines proposed by Cohen (1988: 284-7)" (where 0.01 indicate small effect, 0.06 moderate effect, and 0.14 large effect), indicate large effect

sizes for the above mentioned drivers (Pallant, 2010: 263). This suggests that there is a relationship between these drivers, in that the impact of any one of them has an implication for the others. These results also "show the strength and magnitude of a relationship" between these barriers (Walker, 2003: 525). Following these results, it can also be stated that the practitioners who highly ranked *'enhancement of reputation as a 'sustainable' organisation'* also highly ranked the other two socio-economic sustainability drivers (Sarantakos, 2013).

Table 5.3: Spearman's correlation of the top three ranked socio-economic sustainability drivers

Correlations					
			Enhancement of reputation as a 'sustainable' organisation	Competitive advantage	Client requirement
Spearman's rho	Enhancement of reputation as a 'sustainable' organisation	Correlation Coefficient	1.000	.435**	.279**
		Sig. (2-tailed)	.	.000	.000
		N	193	193	193
	Competitive advantage	Correlation Coefficient	.435**	1.000	.531**
		Sig. (2-tailed)	.000	.	.000
		N	193	193	193
	Client requirement	Correlation Coefficient	.279**	.531**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	193	193	193
**. Correlation is significant at the 0.01 level (2-tailed).					

The results obtained from the Spearman's correlation test (Table 5.3) have strongly corroborated the results obtained in relation to the semi-structured interviews in Table 5.1. It can be observed that these top three drivers (Tables 5.2 and 5.3) were also the three most cited drivers (ranks- number of responses in Table 5.1) by the majority of practitioners who participated in the semi-structured interview phase of the study. Following these findings, it can be argued that these top three drivers are more likely to have overriding impacts on the practitioners drive to pursue social and economic sustainability principles on their regeneration projects. Hence, the above findings provide compelling evidence for practitioners and more particularly, policy makers, to give adequate attention to these top three drivers, if future regeneration projects are to receive a positive drive towards the

delivery of their socio-economic sustainability objectives. Nonetheless, this may also require practitioners and policy makers to revisit their sustainable regeneration policy drivers, and revise them where necessary, to place important emphasis on the drivers that will enable the delivery of the socio-economic sustainability objectives of the projects.

5.12 Summary

The Chapter presented the analysis and discussions on eight (8) socio-economic sustainability drivers and shed light on some major findings that emerged from the analysis which are discussed below:

From the results, it emerged that all the practitioners 21 (100%) who have participated in the semi-structured interviews unanimously indicated that enhancement of reputation was a driver for them to adopt and implement social and economic sustainability principles on their regeneration projects. Likewise, 87% of practitioners who took part in the questionnaire survey also ranked enhancement of reputation as either a very important or important driver towards the adoption and implementation of social and economic sustainability principles in their regeneration projects. They believed that enhancing their reputations as 'sustainability organisation' was a means to continue to secure contracts from their potential clients, such as the local and national authorities who wanted such 'sustainability organisations' to bid for their projects. One deduction that was made by the author from the findings was that these practitioners were only adopting and implementing some aspects of social and economic sustainability principles, just to enable them to meet their own corporate objectives.

In the case of competitive advantage, it emerged that 16 (76%) out of the 21 practitioners who took part in the semi-structured interviews were of the view that gaining competitive advantage was a driver for them. Likewise, over 85% of practitioners who took part in the questionnaire survey were also of the view that gaining competitive advantage was either a very important or important driver in their quest to adopt and implement socio-economic sustainability principles in their regeneration projects. The findings further revealed that the majority of practitioners were integrating social and economic sustainability principles into their business practices because they believed that this was giving them the opportunity to gain advantage over their competitors, particularly during this bad economic climate. An important deduction that was made by the author from this finding was that, in an attempt to gain competitive advantage, there was likelihood for practitioners to 'cut corners' or adopt

and implement short term sustainability practices that were likely to negatively impact on the long term achievement of socio-economic sustainability benefits of the projects.

The findings from the Chapter also revealed that 15 (71%) out of the 21 practitioners who took part in the interview were of the opinion that 'clients' requirements' was what was driving them to adopt and implement socio-economic sustainability principles in the projects. The findings further indicated that over 63% of practitioners who participated in the questionnaire survey phase of the study, were also of the view that meeting clients' requirements was either a very important or important driver, compared to 35.2% of practitioners who either consider clients' requirements as a fairly important or slightly important driver towards their pursuit of socio-economic sustainability factors in their regeneration projects. It was observed that the primary objective for these practitioners was to prove to their clients that they were meeting their requirements, to enable them to win the projects.

The findings from the semi-structured interviews also revealed that 13 (62%) out of the 21 practitioners were of the view that CSR was their driver. Likewise, over 52% of practitioners who were involved in the questionnaire survey phase of the study were of the view that CSR was either important or important driver for them, compared to 46.1% of practitioners who either considered CSR to be a fairly important or slightly important driver for them to adopt and implement socio-economic sustainability principles in their regeneration projects. In the author's opinion, this finding was a good indication of those practitioners' who were willing to adopt and implement social and economic sustainability principles in their regeneration projects.

The findings from the Chapter also revealed that some practitioners were being driven by stakeholder demand. The findings that emerged from the semi-structured interviews indicated that 10 (48%) out of the 21 practitioners were being driven by stakeholders' demands to adopt and implement social and economic sustainability principles in their regeneration projects. It also showed that over 50% of practitioners who participated in the questionnaire survey considered 'stakeholders demands' to be either a very important or important driver, compared to 46.7% of practitioners who either consider stakeholders' demands to be a fairly important or slightly important driver. It was observed from the findings that, a significant

number of practitioners were still not committed to genuinely pursue sustainability principles on their own without being asked to do so.

In terms of ethical and moral obligations, it was revealed from the semi-structured interview findings that 8 (38%) out of the 21 practitioners were being driven by ethical and moral obligations to adopt and implement socio-economic principles in their regeneration projects. It also revealed that 48.7% of practitioners were either of the view that 'ethical and moral obligations' was a very important or important driver, compared to 47.7% of practitioners who either considered the driver as a fairly important or slightly important driver for them to adopt and implement socio-economic sustainability factors in their regeneration projects.

From the Chapter, it also emerged that some practitioners were being driven by 'commitment to sustainability objectives', to adopt and implement socio-economic sustainability in their regeneration projects. The findings obtained from interview revealed that 7 (33%) of the 21 practitioners were of the view that 'commitment to sustainability objectives' was their driver to adopt and implement socio-economic sustainability in their regeneration projects. It also emerged that about 50% of the practitioners who took part in the questionnaire survey either considered 'commitment to sustainability objectives' as a very important or important driver, compared to about 48% who either considered it as a fairly important or slightly important driver to adopt and implement of socio-economic sustainability in their regeneration projects. The 50%, 'very important or important' finding obtained from the questionnaire survey was observed to be higher than the finding obtained from the semi-structured interview (33%). This difference was attributed to the size of sample from which both data was taken. It was also assumed that the lack of adequate commitment demonstrated by both results could be due to the conventional way the success of an organisation's performance was assessed. Another inference which was drawn from the findings was the perceived cost of sustainability, which was possibly influencing the commitment levels of practitioners to adopt and implement its principles in their regeneration projects.

In terms of the 'legislation and legal requirement', the findings from the semi-structured interviews revealed that 5 (24%) out of the 21 practitioners were of the view that 'legislation and legal requirement' was the driver for them to adopt and implement socio-economic sustainability principles in their regeneration projects. Also, from the questionnaire survey, the findings suggested that over 51% of practitioners were of the view that 'legislation and

legal requirements' was either a very important or important driver, while 32.2% of practitioners were also of the opinion that 'legislation and legal requirements' was either a fairly important or slightly important driver for them to adopt and implement socio-economic sustainability in their regeneration projects. An inference which was drawn from this finding was that practitioners who were being driven by legislation and legal requirement to adopt and implement sustainability factors in their projects, were only doing so to enable them satisfy certain 'green construction' requirements and regulations set out by the 'awarding' bodies. Based on the findings from other drivers, it is suggested that 'legislation and legal requirement' was very important to drive practitioners towards the adoption and implementation of socio-economic sustainability factors in their regeneration projects.

CHAPTER 6 THE CONSIDERATION GIVEN TO THE PROMOTION OF SOCIAL AND ECONOMIC SUSTAINABILITY FACTORS ON SUSTAINABLE REGENERATION PROJECTS

6.1 Introduction

This Chapter presents the data analysis and discussion on the social and economic sustainability factors which are currently being given consideration in sustainable regeneration projects in the UK. The data used to present the analysis and discussion for this Chapter is obtained through semi-structured interviews from 21 practitioners (interviewees) and also from 193 practitioners who participated in the questionnaire survey phase of the study. The Chapter begins with a brief background literature on the social and economic sustainability factors and goes on to present the data analysis and discussion of the semi-structured interviews on the social and economic sustainability factors, supported by questionnaire survey data analysis. The analysis and discussion on social and economic sustainability factors are presented based on the highest number or percentage of very high/high results. It finally presents the summary, highlighting the main findings and recommendation for the social and economic sustainability factors discussed in the Chapter.

6.2 Social Sustainability Factors

There are seemingly numerous definitions and criteria of social sustainability principles in literature and in practice. 'Each author or policy maker derives their own definition according to discipline-specific criteria or study perspective, making a generalised definition difficult to achieve' in practical terms (Colantonio, 2007: 4). Several studies have claimed that many practitioners, both within the public and private sectors have only demonstrated a relatively limited understanding, leading to the adoption of relatively weak processes towards the implementation of key sustainability principles in practice (Lombardi *et al.*, 2011).

As social sustainability principles are crucial in developing and building a vibrant society, it is therefore imperative that the requirements underlying the social sustainability principles are clearly set out to drive the social processes and systems towards achieving their intended objectives. It has generally been suggested that social sustainability is an essential component of regeneration which can bring about the desired social sustainability benefits of regeneration projects. The level of focus a development, such as regeneration project, has in delivering social sustainability objectives and socially-oriented success factors, for the present and for

the future, 'from a social sustainability orientated perspective ultimately sets the foundations in determining a development's success in creating a social sustainable development' (Mak and Peacock, 2011: 13). Evidence has shown that the absence of such socially-oriented requirements that adequately place emphasis on creating value and empowerment for society can lead to deprivation and worklessness of residents in a community (SDC, 2003). This can also adversely affect the overall life quality of individuals living within such a community (EPH, 2008; SDC, 2003). Sustainable regeneration projects are likely to fail to materialise their sustainability benefits if the social principles are not accorded adequate attention. For example, it is believed that 'communities, or certain sectors of the community, can fail to benefit from otherwise successful regeneration when gentrification occurs and housing becomes too expensive for the original residents' (SDC, 2003: 27). Social sustainability principles in Colantonio's (2008: 17) view 'are fundamental instruments to measure the progress towards sustainability'. For sustainable projects to be socially sustainable, it means that such projects must deliver healthy living conditions and ultimately improve the quality of life for society (Mak and Peacock, 2011).

According to Edum-Fotwe and Price (2009: 314), the social sustainability principles reflect the societal realities which are created through the 'dynamic interaction of individual values and notions for any particular society'. Addressing such dynamic interactions calls for a more precise application of sustainability practices. It is reasonable to expect communities to be socially sustainable when adequate consideration is given to the application of socially-oriented sustainability practices of regeneration projects. In this regard, practitioners have key roles to play in ensuring that they adopt practices that enable sustainable regeneration projects to deliver long term socially-oriented benefits for society.

In order to ascertain the degree of consideration which is currently given to the promotion of social sustainability factors on regeneration projects, the present study collected data through semi-structured interviews and a questionnaire survey from practitioners who are involved in the delivery of sustainable regeneration projects in the UK construction industry. Data was collected from 21 practitioners through semi-structured interviews and from 193 practitioners who participated in the questionnaire survey phase of the study. From the preliminary analysis of the semi-structured interviews, it emerged that there were two main categories of responses as shown in Table 6.1. The results revealed that all the 21 (100%) practitioners who participated in the semi-structured interviews phase of the study, were given a very high/high

degree of consideration to promoting health and safety of their work force and local community/residents. The results also revealed that while 18 (85.7%) of practitioners were given a very high/high degree of consideration to promoting education and training/apprenticeships opportunities, only 3 (14.3%) of them were found to be given some/limited degree of consideration to this social sustainability factor. Similarly, it was observed that 17 (81.0%) of the 21 practitioners were given a very high/high degree of consideration to promoting affordable housing, while only 4 (19.0%) of them were given some/limited degree of consideration to promoting this social sustainability factor. Additionally, 16 (76.2%) of the 21 practitioners were given a very high/high degree of consideration to promoting stakeholders' participation, while only 5 (23.8%) of them were seen to be given some/limited degree of consideration to the aforementioned social sustainability factor. The results further revealed that 15 (71.4%) of the 21 practitioners were given a very high/high degree of consideration to promoting community security/wellbeing, while 6 (28.6%) of them were also given some/limited degree of consideration to promoting this social sustainability factor on their regeneration projects. Finally, the semi-structured interview results (Table 6.1) further showed that 12 (57.1%) of the 21 practitioners were given a very high/high degree of consideration to promoting the physical appearance/positive image of the local environment, while 9 (42.9%) of them were found to be given some/limited degree of consideration to this social sustainability factor.

Table 6.1: Semi-structured interview results of social sustainability factors

Social Sustainability Factors	Practitioners Total N = 21	
	a*: Very high/high degree of consideration	**b***: Some/limited degree of consideration
Promoting health and safety for work force and local community /residents (PHSFLC)	21 (100%)	-
Promoting education and training /apprenticeships opportunities (PETO)	18 (85.7%)	3 (14.3%)
Promoting affordable housing (PAH)	17 (81.0%)	4 (19.0%)
Promoting stakeholders participation (including local community) (PSP)	16 (76.2%)	5 (23.8%)
Promoting community security/wellbeing (PCS)	15 (71.4%)	6 (28.6%)
Promoting physical appearance / positive image of local environment (PPA/PILE)	12 (57.1%)	9 (42.9%)

a*: Number and percentages (%) of practitioners (interviewees) who either responded very high or high degree of consideration. **b***: Number and percentages (%) of practitioners (interviewees) who either responded some or limited degree of consideration.

The results from the initial analysis of the questionnaire survey (Table 6.2), on the other hand, revealed that 88.1% of practitioners were given a very high/high degree of consideration to promoting the health and safety of their work force and local community/residents, compared to 10.9% of them who were given some/limited degree of consideration to this social sustainability factor. 1.0% of them also indicated that they were not given consideration to this aforementioned social factor at all. The results further revealed that over 80% of practitioners were given a very high/high degree of consideration to promoting education and training/apprenticeship opportunities, while 17.6% of them were also found to be given some/limited degree of consideration to promoting the aforementioned social sustainability factor. Also, 2.1% of practitioners were found not to be given any consideration to promoting this factor at all, in their regeneration projects. Additionally, over 85% were found to be given a very high/high degree of consideration to promoting affordable housing, compared to 13% of them who were given some/limited degree of consideration to promoting this social sustainability factor. The results also showed that 1.6% of them were not given any consideration at all to promoting this social factor on their regeneration projects. The results further revealed that 79.0% of practitioners were given a very high/high degree of consideration to promoting stakeholders' participation, compared to only 19.4% of them who were seen to be given some/limited degree of consideration to promoting this social sustainability factor. Also, 1.6% of them were not given any consideration to promoting this social sustainability factor at all on their regeneration projects. In terms of the social sustainability factor 'community security/wellbeing', the results indicated that 82.4% of practitioners were given a very high/high degree of consideration to promoting it, compared to 15.5% of them who were only given some/limited degree of consideration to promoting it. Again, 1.6% of them were seen not to be given any consideration at all to promoting this social sustainability factor. The results also revealed that 74.1% of practitioners were given a very high/high degree of consideration to the promoting physical appearance/positive image of the local environment, compared to 25.4% of them who were found to have only been given some/limited degree of consideration to promoting the aforementioned social sustainability factor. Similarly, 0.5% of them were observed not to be given any consideration at all to promoting this social sustainability factor.

Table 6.2: Questionnaire survey results of social sustainability factors

Social sustainability factors (percentage)	Very high degree of consi-deration	High degree of consi-deration	Some degree of consi-deration	Limited degree of consi-deration	No consi-deration at all
Promoting health and safety of work force and local community /residents (PHSFLC)	42.0%	46.1%	10.4%	0.5%	1.0%
Promoting education and training/apprenticeships opportunities (PETO)	34.7%	45.6%	9.8%	7.8%	2.1%
Promoting affordable housing (PAH)	30.6%	54.9%	7.8%	5.2%	1.5%
Promoting stakeholders participation (including local community) (PSP)	45.1%	33.9%	12.9%	6.5%	1.6%
Promoting community security/wellbeing (PCS)	22.8%	59.6%	11.4%	4.1%	2.1%
Promoting physical appearance/positive image on local environment (PPA/PILE)	20.2%	53.9%	21.8%	3.6%	0.5%

6.3 Promoting Health and Safety of Workforce and Local Community/Residents

A critical examination of the semi-structured interviews (Table 6.1) reveals that the health and safety of the workforce and local community/residents was the most considered among all the social sustainability factors promoted by practitioners. This was evident as all of the 21(100%) practitioners who participated in the semi-structured interviews have commented that they were given a very high/high level of consideration to promoting health and safety issues of their workforce and also for the entire community of their work locations. When a question was put to them during the interview about the extent to which consideration was given to the promotion of social sustainability factors on their regeneration projects, one of the practitioners for example commented by saying:

We give very high consideration to health and safety issues on our regeneration project, and we do that from start to finish. …We are very mindful of health and safety of our workforce as well as the community we work in. …We place a massive importance on promoting health and safety issues pretty much on our projects. I think we have the responsibility to ensure that our people and residents are safe and healthy to continue to do the kind of things we are doing.

In an attempt to validate the above results, the present study also collected data from 193 practitioners who participated in the questionnaire survey phase of the study. Practitioners were presented with a list of 6 social sustainability factors identified through the review of the literature and from the semi-structured interviews. They were asked to rank the degree of consideration which was being given to the promotion of these six (6) social sustainability factors. The results obtained (Table 6.2) show that 88.1% of them were given a very high/high degree of consideration to promoting the health and safety of their workforce and local community/residents, compared to 10.9% who were given some/limited degree of consideration to this social sustainability factor. The results also reveal that 1.0% of them were not given consideration to promoting the aforementioned social sustainability factor at all on their regeneration projects. Accordingly, the over 88% very high/high degree of consideration result obtained from the questionnaire survey can be said to have validated the 100% very high/high result obtained from the interviews.

These findings provide a good indication that practitioners are taking the health and safety issue seriously and, hence, promoting it on their regeneration projects. Apparently, these findings also support Nwokoro and Onukwube's (2011) study in which the majority of practitioners have ranked health and safety; as well as creating good working environment, as the most important sustainability factor they were promoting towards the attainment of their social sustainability objectives. The work of Martinuzzi *et al.* (2011) has also recognised health and safety practices as major concerns which many construction industry practitioners were paying adequate attention to on their projects. In the earlier work of Littig and Griebler (2005), health and safety issues were classified among the first order group of social sustainability factors which in their view, should be given adequate consideration to by practitioners, in order to achieve a productive and sustainable society. Many other authors like Reyes *et al.* (2014); DBIS, 2013; Akadiri *et al.* (2012); Colantonio (2008); EPH (2008); and Hill and Bowen (1997) have also acknowledged the importance of meeting social sustainability needs through the promotion of good health and safety practices by practitioners who are particularly involved in the delivery of sustainability projects.

It can also be deduced from these findings that the introduction of health and safety legislation by the UK government, which sought to regulate health and safety practices within the UK's construction industry (DBIS, 2013), has played a major role in ensuring that good health and safety regulations are/were being adhered to by practitioners. Similarly, the emergence of the

considerate contractor scheme and the establishment of Health and Safety Executives (HSE), have also contributed to practitioners' quests to promote good health and safety practices on their projects. The considerate contractor scheme and HSE, for instance, both set standards and performance targets on which practitioners' health and safety performances are measured. Since practitioners are aware of the potential consequences and the various sanctions in cases of any violation of such legislation and non-performance, they are more likely to promote health and safety practices than the other social sustainability factors on their projects. Hence, these findings resonate with this position. However, this notwithstanding, the findings are refreshing and a good sign towards the attainment of some social sustainability objectives of regeneration projects.

Various other efforts initiated by the UK government to improve on health and safety practices within the construction industry can be said to have also contributed to these findings. Notable among them are the Rethinking Construction Committee Egan Report (1988) and the DETR (2000) report which raised various concerns about poor health and safety practices and the potential dangers such poor practices were posing to the entire construction industry towards the delivery of sustainable construction objectives. In recognition of such poor practices, the reports admonished construction industry practitioners to make a serious effort to promote good health and safety practices on their projects. Consequently, this has led to numerous discourses among practitioners, culminating in the creation of greater awareness among construction industry practitioners. The author is also of the view that this might have been reflected in these findings. It is believed that by promoting good health and safety practices adequately and by ensuring an enabling working environment for the workforce and society, sustainable regeneration projects will be more likely to deliver some key factors of the social sustainability ambitions they are intended to deliver (Akadiri *et al.*, 2012; CLG, 2008).

6.4 Promoting Education and Training/Apprenticeships Opportunities

Further analysis of the semi-structured interviews also reveals that some practitioners were promoting education and training/apprenticeship schemes on their regeneration projects. The results in Table 6.1 reveal that 18 (85.7%) of the 21 practitioners who participated in the interviews were given a very high/high degree of consideration to promoting education and training/apprenticeships on their regeneration projects. 3 (14.3%) of the 21 practitioners were also given some/limited consideration to promoting the aforementioned social sustainability

factor on their regeneration projects. The principles underlying the social regeneration concept require that practitioners focus their sustainability practices on the development of education and skills requirements for society. Social sustainability rests on the proposition that developing the education and training/skills requirements of individuals will provide opportunities for such individuals to acquire employability skills, which will then place them in a better position to secure employment and improve their standard of living (Colantonio, 2008). This position was echoed by one of the practitioners during our interview discussion by saying:

…We give very high consideration to education and training opportunities on our projects. Opportunities for education and training for young guys are in the fore front of what we do as practitioners and we always consider these things pretty much. We know, that's the best way to give these guys employability skills for future jobs and obviously give them a better quality of life. We reckon that providing education and training for these guys has a lot of social benefits for themselves and our own industry as well.

The above view expressed concurs with the views of DBIS, 2013, Nwokoro and Onukwube (2011) and CLG (2007), who indicated that the promotion of education and skills training programmes will potentially help to build the capacity of the workforce and also enhance the skills requirements for the construction industry.

To validate the interview findings, a questionnaire survey was also conducted with 193 practitioners involved in the delivery of sustainable regeneration projects. The results in Table 6.2 indicate that out of the 193 practitioners who responded to the questionnaire survey, over 80% of them were given a very high/high degree of consideration to promoting education and training opportunities, compared to 17.6% of them who were also given some/limited degree of consideration to promoting the aforementioned social sustainability factor. The results further suggest that about 2% of practitioners were not given any consideration to promoting education and training opportunities at all on their regeneration projects. Apparently, the over 80% very high/high degree of consideration results (Table 6.2) obtained from the questionnaire survey can be said to have validated the 85.7% very high/high degree of consideration results obtained from the interviews.

The above findings can also be seen to be lending support to many authors like DBIS, 2013; Carpenter (2011); Pitt *et al.* (2009) and Colantonio (2008), who have acknowledged the importance of promoting education and training opportunities towards the achievement of the social sustainability objectives. They argued that promoting education and skills training opportunities was one crucial means through which individuals' education and skills capacities can be enhanced, to enable them to take advantage of future job opportunities. According to One NorthEast (2009), the development of individuals' skills characteristics are critical to their ability to access employment opportunities which, in turn, largely influences their capacity to contribute to the development of the entire society. Earlier work by EPH (2008) agreed with the above position, by suggesting that individuals who were living with limited education and training abilities were more likely to face problems of low self-esteem and aspirations.

Although some practitioners seem not to be giving a very high/high degree of consideration (Table 6.1) to the promotion of education and training opportunities on their projects, the findings obtained still give a good signal of practitioners' willingness to use their regeneration projects to build individuals' skills capacities for their potential future employment. However, it can also be suggested that some practitioners who may be given very high/high consideration to promoting education and training opportunities, may be doing so just to satisfy the requirements of the contracts and not because they believe it is an important factor towards the achievement of the social regeneration objective. This could be the case because, in recent times, many public sector regeneration projects were found to have been awarded to practitioners who were meeting this social sustainability factor requirement. Hence, practitioners who may be aware of this phenomenon may attempt to promote this social factor as a way of satisfying such contract requirements.

One major issue which can have a serious implication on the quality of education and training schemes provided by practitioners, is the duration (start-finish) of the projects. Since such education and training schemes are often tied up to the duration of the projects, it is important that practitioners take cognisance of this when planning their education and training programmes, to ensure that they are well planned to match a project's duration as well as the an individual's training requirements. For this reason, a trainee transfer scheme could be introduced for trainees who are unable to complete their training due to the limited duration of a particular regeneration project. The author is of the view that the introduction of such a

trainee transfer scheme will enable trainees to be transferred to another project (which may not necessarily be with the same practitioner they began their training with), to complete their training.

6.5 Promoting Affordable Housing

The analysis of the semi-structured interviews further reveals that practitioners were also promoting the provision of affordable housing regeneration as a way of meeting communities' social sustainability objectives. Of the 21 practitioners who participated in the interview (Table 6.1), 17 (81.0%) of them were given a very high/high degree of consideration to promoting the provision of affordable housing-led regeneration for communities, while 4 (19.0%) of the 21 practitioners were also given some/limited degree of consideration to promoting the aforementioned social sustainability factor for communities. When the author sought to enquire from practitioners as to why affordable housing regeneration was highly considered by them, one of the practitioners indicated that:

...We give high consideration to housing because we think communities can only be made sustainable if people have good houses and can also afford to live in them. ...I think, when we talk about delivering sustainable regeneration, it is ultimately about the provision of affordable housing.

In an attempt to validate the above interview results, the present study also sought the views of 193 practitioners through a questionnaire survey. The results obtained in Table 6.2 indicate that 85.5% were given a very high/high degree of consideration to promoting affordable housing-led regeneration projects, compared to 14.0% of them who were also given some/limited degree of consideration to promoting the above mentioned social sustainability factor. The results (Table 6.2) further reveal that 1.5% of them were not given any degree of consideration at all to promoting housing-led regeneration projects. The 85.5% 'very high/high' result obtained from the questionnaire survey can be seen to be corroborating the 81.0% 'very high/high' result obtained from the interviews. Based on these results, it can be concluded that the majority of the UK's regeneration practitioners believe that providing affordable housing-led regeneration is one major means of meeting the social sustainability needs of communities.

The findings are consistent with the literature review in Chapter 2 and the findings obtained in Chapter 4 about the practitioner's involvement in the different types of sustainable regeneration projects in the UK. From the literature review, it was observed that the provision of housing has been the dominant type of regeneration project in which a lot of investment has been concentrated on over the years in the UK (CLG, 2010; CLG, 2008; Scottish Centre for Regeneration (SCR), 2008; HM Treasury, 2007). This can be said to explain and justify why the majority of practitioners are seen to be considering the promotion of housing-led regeneration project as revealed in the findings of this study. Authors like Clapham, 2014; Abidin, *et al*. (2013); Bailey (2010); Winston (2009); and Smith (2006) are of the view that focusing on the provision of affordable housing can provide the means through which practitioners can deliver the sustainable development objectives for communities.

6.6 Promoting Stakeholders Participation (Including Local Community)

The results (Table 6.1**)** obtained from the semi-structured interviews also indicate that a good number of current regeneration practitioners in the UK were promoting stakeholder participation on their regeneration projects. Of the 21 practitioners who participated in the semi-structured interview phase of the study, 16 (76.2%) of them were found to be given a very high/high degree of consideration to promoting stakeholder participation on their regeneration projects. The results (Table 6.1) further establish that 5 (23.8%) of the 21 practitioners were also given some/limited degree of consideration to promoting stakeholder participation on their projects.

The principles underpinning the delivery of social sustainability also require full participation of all the stakeholders who have an interest or stake in the project. From the stakeholders' perspective, the promotion of stakeholders' interests is one major consideration for ensuring that regeneration is meeting the social sustainability needs of all the concerned parties. This is because inputs from a broad range of stakeholder groups can generally help practitioners to ensure that regeneration projects deliver more appropriate, authentic and distinctive social sustainability benefits for all the stakeholders (CLG, 2008). The majority of practitioners who participated in the interviews have also identified the importance of promoting stakeholder participation on their projects, as one of the practitioners highlighted their stakeholder participation approach, adopted in delivering their regeneration projects:

We give high priority to stakeholder views and participation on our projects. We consider that as an important part of our work. Because we believe that stakeholders views matter, so we adequately engaged with various groups of people whenever we win a bid to deliver regeneration projects to seek their views. …The participation of the local community groups and all the right people is very important for us and we try to engage with them, even before we start any regeneration development on site.

To complement the semi-structured interview results, a questionnaire survey was also carried out. Of the 193 practitioners who participated in the questionnaire survey phase of the study, the results (Table 6.2) reveal that 79.0% of them were found to be given a very high/high degree of consideration to promoting stakeholder participation on their projects, compared to 19.4% of them who were given some/limited consideration to promoting this social sustainability factor on their projects. Likewise, 1.6% of practitioners were also observed not to be given any degree of consideration to promoting the aforementioned social sustainability factor at all on their projects. In comparing both results in terms of their 'very high/high degree of consideration' responses, it can be said that the 79.0% result obtained from the questionnaire survey lends support to the over 76% result obtained from the interviews.

The findings can also be said to be lending support to a number of works obtained through the review of literature in Chapter 2. Studies carried out by Carpenter (2011), Colantonio (2008), and EPH (2008), have acknowledged the importance of stakeholder participation towards the successful delivery of sustainable regeneration projects and also underscored the need for adequate consultations and participation of all the key stakeholders in the projects. The CLG (2008) and SDC (2003) reports, for instance, suggested that sustainable regeneration objectives were more likely to be realised when the key stakeholders, such as the local communities, were placed at the centre of the regeneration delivery process. Other authors like Häkkinen and Belloni (2011), Colantonio (2007), Littig and Griebler (2005), were of the view that emphasising the promotion of practices that ensure adequate participation of stakeholders in regeneration delivery processes was the surest way practitioners could make sure that regeneration was delivering its sustainability objectives for all the stakeholders concerned. Equally, promoting such practices Madlener *et al.* (2003) believed, was necessary in helping to ensure the transparency of the projects, as well as the empowerment of all the stakeholders.

Again, it is encouraging to observe that practitioners are aware of the importance of stakeholders' views and that the majority of them are promoting their participation on their projects. However, the findings can also be attributed to numerous government reports which have evaluated the performance of previous regeneration initiatives (CLG, 2010, 2008) and aligned the sustainability failures of most of these projects to inadequate participation of stakeholders, particularly the local communities (i.e. the local content). In view of these reports, the local communities are now demanding greater participation from practitioners whenever regeneration projects are being initiated in their localities. Hence, the above findings can be said to be a reflection of such local communities' demands.

It can be argued that practitioners who are adequately promoting participation of all their stakeholders are also less likely to encounter opposition or vandalism on their projects from the community where they are operating, which is also likely to lead to loss of property and delays of their projects. Equally, community groups that are fully participating in the delivery of the projects could also be useful resources for practitioners and policy makers, to tap their knowledge for future regeneration projects in their communities.

6.7 Promoting Community Security/Wellbeing

The results (Table 6.1) obtained through the analysis of the semi-structured interviews also indicate that some practitioners were promoting the social sustainability factor relating to community security/wellbeing. Out of the 21 practitioners who took part in the interview phase of the study, 15 (71.4%) of them were observed to be given a very high/high degree of consideration to promoting community security/wellbeing on their regeneration projects. The results in Table 6.1 also reveal that 6 (28.6%) of the 21 practitioners were given some/limited degree of consideration to the above mentioned social sustainability factor on their projects. During the interview discussions, it became clear that practitioners were of the view that addressing security issues was an important means of ensuring the wellbeing of the residents. One of the design principles they highlighted to be applying to promote security/wellbeing on their projects, was the 'secure by design' concept, as one of the practitioners indicated by saying:

…One of the biggest social issues we consider on our sustainable regeneration projects is how we can help to reduce the rate of crime and security and anti-social behaviours in those areas that we are working. So we take security issues very seriously and give high

consideration to it on our projects because we think that's how we can ensure the wellbeing of residents in the area. We make sure that all our projects are based on secure by design principles. That's how we try to promote these things.

To further investigate the issues, the present study also collected data from 193 practitioners who participated in the questionnaire survey phase of the study. The results obtained (Table 6.2) show that 82.4% of the practitioners were given a very high/high level of consideration to promoting community security/wellbeing on their projects, compared to 15.5% of them who were given some/limited level of consideration to promoting security/wellbeing issues on their projects. The results further indicate that 2.1% of them were not considering the promotion of the aforementioned social sustainability factor at all on their projects. Although the 82.4% 'very high/high degree of consideration' result obtained from the questionnaire survey seems to be higher than the 71.4% 'very high/high degree of consideration' result obtained from the semi-structured interview, the former (82.4%) result can be said to have validated the later (71.4%) result. The difference between the two results could possibly be as the result of the sample size from which both data was taken from; 21 practitioners (interviews) and 193 practitioners (questionnaire survey).

The above findings strengthen the earlier work of Pitt *et al.* (2009) who linked the security and wellbeing of society to the quality and layout of the sustainable regeneration projects. It has been documented that places that have benefited from regeneration initiatives have been seen to be less prone to crime and insecurity (CLG, 2008; HM Treasury, 2007). The maintenance and improvement of security and wellbeing depends on the social performance of projects and the built environment (Pitt *et al*, 2009). According to DEFRA (2005) and SDC (2003), the main goal of the sustainability initiatives is to enable society to satisfy their basic social needs and enjoy a better quality of life within a well secured environment without compromising the quality of life of the future. It is argued that society can potentially thrive and achieve their sustainability goals in an environment where there are fewer crimes and people are free to go about their duties without fear. Insecurity among society poses a threat towards the attainment of wellbeing and quality of life of society, and these are the concerns that sustainable regeneration projects are meant to address. It is suggested that social sustainability objectives can be achieved when practitioners focus their regeneration practices on addressing the underlying conditions that lead to the creation of insecurity and crime within the communities (Clapham, 2014; CLG, 2008).

From Tables 6.1 and 6.2, it is refreshing to observe that the majority of practitioners who participated in the present study, are given a very high/high level of consideration to the security/wellbeing factor on their regeneration projects. For this group of practitioners, this can help them boost their image as 'sustainability' practitioners. The social sustainability factor relating to security/wellbeing is central to the delivery of any successful sustainable regeneration project, hence it is important that other practitioners who are seen (as per these findings) not to be either considering and promoting this social factor very highly/highly or at all, should be encouraged to promote this social sustainability factor adequately.

6.8 Promoting Physical Appearance/Positive Image of Local Environment

The analysis of the semi-structured interviews reveals that practitioners were also promoting factors relating to the physical appearance of their regeneration projects. The interview results (Table 6.1) show that of the 21 practitioners who took part in the interviews, a little over half, 12 (57.1%) of them were given a very high/high degree of consideration to promoting the social factors relating to the physical appearance or environment of their regeneration projects. Also, the results (Table 6.1) further show that 9 (42.9%) of the 21practitioners were given some/limited degree of consideration to promoting the above mentioned social sustainability factor on their projects. Sampling their views, it became obvious that the majority of practitioners were of the view that doing so was very important for their projects to make the community more attractive. Focusing on promoting the physical environment for one of the practitioners was an opportunity for them to win awards, as he indicated by saying:

...I think the way an area looks needs to be a focus. We recognise the local physical environment as an important part of regeneration. We try to make our projects environment and areas attractive for the long term. So we give very high consideration to the physical environment and we pick up accreditations and awards on the back of it as some of regeneration services we provide which is good for us...

The above comment also goes to confirm the findings obtained in Chapter 5, where it was observed that some of the practitioners were adopting and implementing sustainability factors they believe were helping them to boost their reputations. A thorough review of (Table 6.2) the results obtained from the 193 practitioners who took part in the questionnaire survey phase of the study, further reveals that 74.1% of them were given a very high/high degree of consideration to promoting the physical environment, compared to 25.4% of them who were

also given some/limited degree of consideration to promoting the aforementioned social sustainability factor. The results also reveal that 0.5% of them were not given any degree of consideration at all to promoting this social sustainability factor on their projects. However, the results obtained from the questionnaire did not seem to have supported the interview results. A possible reason for this could be the number of practitioners who were involved in both studies. It could also be assumed that the majority of practitioners who took part in the present study were previously involved in the delivery of regeneration projects where the design or the planning gave prominence to the physical sustainability factor. Nonetheless, the nearly 60% and 74.1% very high/high results obtained from the interviews and questionnaire survey, respectively give an indication that the majority of practitioners who are currently involved in sustainable regeneration projects in the UK are either very highly or highly promoting the physical aspects on their projects.

To a large extent, it can be said that the findings are consistent with the literature. From Ball's (2004) earlier study of community involvement in sustainable regeneration, it was observed that the physical aspect of regeneration was the main focus of the majority of practitioners who participated in his study. One major benefit of improving the physical environment is also about improving the image of the area. A good physical environment can help to attract people, investment and business opportunities in the area (CLG, 2008). Efforts to enhance the local image, to alter external perceptions and re-brand the place in a more positive way are considered as an essential component of a broader regeneration strategy which is aimed at developing a new socio-economic structure of the locality (CLG, 2008). Improving the physical environment SERCS (2011) and HM Treasury (2008) identified as one of the key sustainability objectives sustainable regeneration also seeks to achieve for the communities. This is because the way and manner regeneration projects are delivered has a significant impact on the quality of the physical environment and the social sustainability relationships of the community and individual social wellbeing within an area (SCR, 2008). Hence, it is suggested that sustainable regeneration interventions which are designed and delivered to also 'achieve the physical regeneration of neighbourhoods are more likely to culminate in measurable and visible' sustainability achievements (CLG, 2010).

The principles underpinning the sustainable regeneration concept seek to provide a strong collaboration between the social and economic sustainability objectives (CLG, 2010). For example, there is a general consensus that sustainable regeneration is about delivering the

socio-economic sustainability benefits to enhance the living conditions of the people and not to contribute to the reduction of carbon emissions (SDC, 2003). According to Bruntland '*our common future'* (1987), issues relating to social and economic development are mutually reinforcing, which are required to be handled in a concurrent manner. It is said that social and economic problems may combine in certain communities to 'create or reinforce poverty and deprivation'; in which regeneration initiatives represents a response to address by seeking to promote greater socio-economic prosperity for such communities (Smith, 2006: 271). Hence, the next section presents the analysis and discussion on the findings of the economic sustainability factors for the present study.

6.9 Economic Sustainability Factors

Of crucial importance to delivering sustainable regeneration that meets individuals' economic aspirations is the economic aspect of sustainability. The potential for regeneration projects to generate economic benefits has long been recognised as a driver for economic growth and a major determinant of an economically vibrant society. Economic benefits resulting from regeneration initiatives can be considered and evaluated in terms of different groups of intended beneficiaries (CLG, 2010). From a sustainable development perspective, sustainable regeneration represents the realignment of a society's economic aspirations with the processes of life (Mang and Reed, 2012).

Economic sustainability of individuals is essential to sustainable regeneration, in that it has far reaching implications on an individual's economic survival and prosperity in general. The literature on regeneration provides a range of concepts that support the argument that an increase in economic aspirations of an individual has the potential to impact on the overall economic fortune of the entire society (ODPM, 2006). Generally, the performance of sustainable regeneration projects is also defined by the economic sustainability opportunities created by these projects. Accordingly, to deliver sustainable regeneration projects that generate such economic sustainability opportunities and benefits, brings to the fore the consideration and promotion of economic sustainability factors by regeneration practitioners on their projects.

The initial analysis of the semi-structured interviews also indicated that there were two main categories of responses from practitioners, as shown in Table 6.3. In the case of economic sustainability factors, the results obtained from the initial analysis of the semi-structured

interviews (Table 6.3) revealed that 20 (95.2%) of the 21 practitioners were given a very high/high degree of consideration to promoting value for money, while only 1 (4.8%) practitioner was found to be given some/limited degree of consideration to this economic sustainability factor. The results also suggested that 18 (85.7%) of them were given a very high/high degree of consideration to promoting profitability for investors/developers (return on investment), while 3 (14.3%) were given some/limited degree of consideration to this economic sustainability factor. 16 (76.2%) of them were also seen to be given a very high/high degree of consideration to promoting employment opportunities, while 5 (23.8%) practitioners on the other hand, were given some/limited degree of consideration to promoting the aforementioned economic sustainability factor. Also, 13 (38.1%) practitioners were given a very high/high degree of consideration to promoting the local/area economic growth, likewise 7 (33.3%) of them were given some/limited degree of consideration to this economic sustainability factor. The interview results further suggested that 9 (42.9%) of the 21 practitioners were also given a very high/high degree of consideration to promoting local community organisations and enterprises, while 12 (57.1%) were also found to be given some/limited degree of consideration to promoting this economic sustainability factor.

Table 6.3: Interview results of the economic sustainability factors

Economic Sustainability Factors	Practitioners Total N = 21	
	a*: Very high/high degree of consideration	**b***: Some/limited degree of consideration
Promoting value for money (PVM)	20 (95.2%)	1 (4.8%)
Promoting profitability for investors/developer (Return on investment) (PPI/ROI)	18 (85.7%)	3 (14.3%)
Promoting employment opportunities (PEO)	16 (76.2%)	5 (23.8%)
Promoting local/area economy growth (PLEG)	13 (61.9%)	7 (33.3%)
Promoting local community organisations/enterprises (PLCO)	9 (42.9%)	12(57.1%)

a*: Number and percentages (%) of practitioners (interviewees) who either responded very high or high degree of consideration. **b***: Number and percentages (%) of practitioners (interviewees) who either responded some or limited degree of consideration.

Further to the above interview results, the results obtained from the preliminary analysis of the questionnaire survey in Table 6.4 showed that over 88% of practitioners who participated in the survey phase of the study were found to be given a very high/high degree of consideration to promoting value for money, compared to 10.7% of them who were also

observed to be given some/limited degree of consideration to promoting the aforementioned economic factor. The results also revealed that 1.0% of practitioners were not considering the promotion of this economic factor at all on their projects. The results also showed that 85.1% of practitioners were given a very high/high degree of consideration to promoting profitability for investors/developers (return on investment), compared to 13.9% who were also given some/limited degree of consideration to promoting this economic sustainability factor. Similarly, 1.0% of them were found not to be given any consideration at all to promoting the aforementioned economic factor. Furthermore, the results (Table 6.2) indicated that 80.0% of practitioners were given a very high/high degree of consideration to promoting employment opportunities, while 19.0% were also given some/limited degree of consideration to promoting this economic sustainability factor. Moreover, 1.0% of them were seen not to be given any consideration at all to promoting this economic factor. Similarly, 66.5% of practitioners were given a very high/high degree of consideration to promoting the local/area economic growth, compared to 32.0% of them who were given some/limited degree of consideration to promoting this economic factor. Also, 1.5% of them were not given any consideration to promoting it at all on their projects. Finally, the results also revealed that 77.7% of practitioners who took part in the survey were given a very high/high degree of consideration to promoting local community organisations and enterprises, compared to 20.2% of them who were also given some/limited degree of consideration to promoting this economic factor. Likewise, 2.1% of them were not given any consideration at all to promoting the aforementioned economic factor.

Table 6.4: Questionnaire survey results of the economic sustainability factors

Economic sustainability factors (percentage)	Very high degree of consi-deration	High degree of consi-deration	Some degree of consi-deration	Limited degree of consi-deration	No consi-deration at all
Promoting value for money (PVM)	39.9%	48.4%	8.6%	2.1%	1.0%
Promoting profitability for investors/developer (Return on investment) (PPI/ROI)	45.2%	39.9%	11.0%	2.9%	1.0%
Promoting employment opportunities (PEO)	43.1%	36.9%	12.8%	6.2%	1.0%
Promoting local/area economy growth (PLEG)	27.5%	39.0%	24.9%	7.1%	1.5%
Promoting local community organisations/enterprises (PLCO)	21.2%	56.5%	13.5%	6.7%	2.1%

6.10 Promoting Value for Money

A close examination of Table 6.3 reveals that of the 21 practitioners who participated in the semi-structured interviews, 20 (95.2%) of them were given a very high/high degree of consideration to promoting 'value for money' on their regeneration projects. However, only 1(4.8%) practitioner was found to be given some/limited level of consideration to promoting this economic sustainability factor. The majority of practitioners were of the view that delivering value for money was the means through which economic sustainability benefits could be realised for them and their beneficiaries. In exploring the issues with the practitioners during the interviews, it became obvious that the majority of them were linking their economic sustainability practices to their monetary objectives. This was demonstrated by a comment made by one of them by saying:

…Value for money is all we want our regeneration projects to deliver for us and our beneficiaries. So we give very high consideration to it from the beginning through to the completion of our projects. The value for money bit will make the projects achieve their economic features which obviously will help us to save money and continue to provide regeneration.

The 'value for money' economic sustainability factor, to the majority of practitioners, was about ensuring that the projects were designed to achieve their intended economic sustainability benefits in a cost effective manner, through the value engineering and procurement processes of the projects. They also highlighted that the application of the whole life costing concept was helping them to adequately promote the value for money practices on their sustainable regeneration projects.

In an attempt to validate the above results obtained from the 21 practitioners who participated in the interview phase of the study, data was also obtained from 193 practitioners through a questionnaire survey. Of the 193 practitioners who took part in the questionnaire survey phase of the study, the results (Table 6.4) indicate that 88.3% of them were given a very high/high degree of consideration to promoting 'value for money', compared to only 10.7% of them who were given some/limited degree of consideration to it. Also, only 1.0% of them were not given any degree of consideration at all to promoting this aforementioned economic factor on their projects. The opinions expressed by practitioners who participated in the questionnaire survey (high/high responses - 88%) can be seen to have been corroborated by the views

expressed by practitioners during the interviews (high/high responses – 95.2%). Although practitioners who were interviewed were linking their value for money practices to their monetary objectives, their overall responses which outlined their value for money practices adopted for their regeneration projects can be said to be positive. The findings are also consistent with the works of CLG (2010), Standing and Jackson (2007), and Adair *et al*. (2003), in which they observed that achieving value for money was the main rationale behind many practitioners' involvement in the promotion and delivery of the sustainable regeneration concept in the UK. It can be argued that value for money, if connected to money issues, could lead to mis-prioritisation of the main economic sustainability priorities for the projects. It is imperative for practitioners to understand that the value for money economic sustainability objective is not only about making money from the projects, but it is also 'about maximising the impact of money spent' (While *et al.*, 2013: 2). Hence, it is important that practitioners are made aware of this, particularly when involved in the delivery of public funded regeneration projects, to ensure that their value for money practices adopted for the projects take into account the main economic sustainability factors that will enable the projects to deliver their economic sustainability objective. It can also be inferred that the value for money practices, which are also only focused on the whole life costing, are also likely to lead to concentration on the environment sustainability factors, to the neglect of the economic sustainability factors which are necessary to deliver the economic sustainability benefits of the projects.

6.11 Promoting Profitability for Investors/Developers (Return on Investment)

From the analysis of the semi-structured interviews in Table 6.3, it was also discovered that practitioners were also promoting the economic sustainability factor relating to profitability/return on investment on their projects. Of the 21 practitioners, 18 (85.7%) of them were given a very high/high degree of consideration to promoting profitability issues on their regeneration projects. The results (Table 6.3) further indicate that 3 (14.3%) of them were also given some/limited degree of consideration to promoting the above mentioned economic sustainability factor on their projects. It was observed during the interview discussions that the majority of practitioners were of the view that the generation of profit from regeneration development was an important economic sustainability factor for them and the investors who were making the development to happen. As one practitioner for example, indicated by saying:

...Regeneration development is anchored on generating profit for the investor and the organisation that makes it happen. It's got to be development which generates the commercial returns we want because without these commercial returns, there won't be any regeneration. So we see profitability as an important economic sustainability factor and we tend to give very high consideration to it on our works.

The majority of practitioners were also of the view that since regeneration was a capital intensive venture, considering profitability was a means for them to recoup monies invested in the projects, to enable them to continue to provide regeneration projects for the communities. Probing the issues further to establish the type of investment they were making for which they felt profitability was an important economic factor, the majority of them cited the time and resources they were spending on trainees and other CSR services they were providing on their projects for their beneficiary communities.

Interestingly, these results were further strengthened by the results obtained from the practitioners who participated in the questionnaire survey phase of the study. Of the 193 practitioners who responded to the questionnaire survey (Table 6.4), 85.1% were given a very high/high degree of consideration to promoting profitability, compared to 13.9% of them who were also observed to be given some/limited degree of consideration to it. However, it was further observed that only 1.0% of practitioners were not given any level of consideration to promoting the aforementioned economic sustainability factor on their projects. Clearly, it can be seen that the 85.1% 'very high/high degree of consideration' questionnaire survey result has validated the 85.7% 'very high/high degree of consideration' result obtained from the semi-structured interviews.

Again, the above findings confirm the findings obtained in Chapter 5 in relation to the socio-economic sustainability drivers. The literature on economic sustainability provides a wide range of empirical evidence that has corroborated these results, in which profit generation has been cited as a major reason for the majority of practitioners' involvement in sustainability issues (Henderson, 2011; Smith and Sharicz, 2011). In a study reported in CLG (2010), it was observed that the management strategies of the majority of practitioners, who were involved in the delivery of community regeneration programmes, were focused on profit generation and return on investment. The findings from the report further suggested that practitioners were of the view that recouping money from their investments was the best way they could

remain economically sustainable, to enable them to continue to invest in community regeneration programmes.

Clearly, it can be seen that the current practices which are being considered to deliver the economic factors of sustainable regeneration are over shadowed by practitioners' economic sustainability interest, as also observed in Chapter 5 in relation to the socio-economic sustainability drivers. A significant proportion of economic benefits of sustainable regeneration projects still remain in the hands of practitioners who are providing these projects. From these findings it can be concluded that the majority of practitioners who are currently involved in the delivery of sustainable regeneration projects in the UK are prioritising their economic sustainability interests far and above the underlying economic sustainability objectives which regeneration projects are set out to achieve. If this trend continues, as per these present findings and the earlier ones reported by Henderson (2011); Smith and Sharicz (2011); and CLG (2010), then achieving successful regeneration which delivers economic sustainability objectives for the intended beneficiaries would be unlikely to be achieved. However, it is important that practitioners are made aware of the fact that long term economic regeneration can only be delivered when the projects' economic sustainability factors are considered far and above other personal considerations and then promoted accordingly. The author believes that adopting such practice(s) will not only deliver economic transformations for the intended communities, but will also result in numerous benefits for practitioners themselves, since they are also part of the larger community in which sustainable regeneration projects are delivered.

6.12 Promoting Employment Opportunities

The results obtained from the analysis of the semi-structured interviews also show that practitioners were promoting employment opportunities on their regeneration projects. An inspection of Table 6.3 reveals that, of the 21 practitioners who took part in the interviews, 16 (76.2%) of them were given a very high/high consideration to promoting employment opportunities on their projects. Further inspection of Table 6.3 also indicates that 5 (23.8%) of the 21 practitioners were also given some/limited consideration to promoting the above mentioned economic sustainability factor on their projects. In an attempt to explain why employment generation was such an important consideration, one practitioner expressed his view by indicating that:

…We see employment opportunity as a very important aspect of community regeneration, so we try as much as we can to give high consideration to employment issues on our regeneration projects.…My personal view is that to create true sustainable regeneration in communities, people have to be given true sustainable employment opportunities, because everything else would then fall out from there. This view was also acknowledged by CLG (2010) and CLG (2008).

To validate the interview findings, the present study also obtained data from 193 practitioners through a questionnaire survey. The results obtained in Table 6.4 indicate that 80.0% of practitioners were given a very high/high degree of consideration to promoting employment opportunities, compared to 19.0% of them who were also given some/limited level of consideration to promoting employment opportunities on their projects. The results further indicate that 1.0% of practitioners were not given any level of consideration at all to promoting employment opportunities on their projects. Comparing the two results in terms of their 'very high/high' response, it can be said that there is a significant level of agreement between the interview (76.2%) and questionnaire survey (80.0%) results. These results also give an indication that the majority of practitioners are currently employing people on their regeneration projects, which the author considers as encouraging and refreshing. It can also be suggested that the findings could possibly encourage the UK government towards greater investment in sustainable regeneration, to help reduce unemployment rates within the communities; and by extension, help to increase the prospects for future regeneration projects/activities for practitioners and communities.

The above findings are also consistent with the works of OGC (2011); CLG (2010) and Marais and Botes (2007), which have identified consideration of employment opportunities as a major economic factor, crucial for regenerating the local economy. Many other works on regeneration have also acknowledged high levels of employment opportunities as an essential requirement for enhancing the economic functioning and performance of people (Clapham, 2014; Akadiri *et al.,* 2012; CLG, 2008; HM Treasury, 2007; Roseland, 2000). The strong emphasis on improving the economic performance of sustainable regeneration means that access to employment opportunities will have to be given adequate consideration by practitioners. It is argued that the significance of connecting individuals' economic development to their sustainable development aspirations is entrenched in their ability to secure sustainable employment (Marais and Botes, 2007). Consequently, it can be suggested

that by promoting individuals' access to employment opportunities on regeneration projects, such individuals are more likely to meet their economic sustainability aspirations. Likewise, the overall community and national economic sustainability performance could also be enhanced (ODPM, 2006).

6.13 Promoting Local/Area Economic Growth

In addition to employment creation, practitioners who were involved in the semi-structured interviews were also observed to be promoting the economic growth of the local areas where they were working. As per Table 6.3, the results suggest that 13 (61.9%) of the 21 practitioners were given a very high/high level of consideration to promoting this economic sustainability factor, while 7 (33.3%) of them were also given some/limited level of consideration to the above economic sustainability factor on their projects. One major issue which became apparent during the interview discussions was the continuous references to procurement practices adopted to promote the economic growth of the local area. As one of the practitioners indicated:

…Economically, we promote it through our procurement process. We tend to place very high emphasis on procuring our subcontractors, labour, materials etc., within the geographical area of our projects. That's how we influence the economic growth of the local area of our projects.

Practitioners also highlighted during the interviews that they were spending a lot of money in the local shops which in their view, was also helping to promote the economic sustainability of those local shops, which in turn, was feeding back into promoting the economic growth of the entire locality. In an attempt to validate the views expressed by the 21 practitioners who participated in the interviews, the study further obtained data from 193 practitioners who responded to the questionnaire survey of the present study. Of the 193 practitioners, the results (Table 6.4), show that 66.5% of them were given a very high/high degree of consideration to promoting economic growth of the local area, compared to 32.0% of them who were also given some/limited degree of consideration to it. The results further suggest that 1.5% of them were not given any consideration to promoting the aforementioned economic sustainability factor at all on their projects.

Largely, the questionnaire survey results can be said to have validated the results obtained from the semi-structured interviews. Evidence from literature has shown that focusing regeneration intervention within a certain locality can help to stimulate the economic growth of the entire locality (Clapham, 2014; CLG, 2008). Hence, it is a good indication to observe that practitioners are given consideration to improving the economic conditions of the areas they are working. Conversely, the findings could also be as a result of the incentive schemes set up by some of the local authorities, which may be making practitioners to adopt local area procurement practices. It is asserted that one of the key objectives of economic regeneration is 'to strengthen the local economy and create wealth' and sustainable growth for individuals and the communities (ESC, 2006: 6). However, to achieve this objective means that economic growth deliverables will have to be promoted adequately through robust economic sustainability practices, to enable the economic growth of such communities (HM Treasury, 2007). It is argued that sustainable 'regeneration can facilitate places to adapt to find new roles in the global economy, and provide residents with new opportunities to benefit from and contribute to economic growth' (CLG, 2008: 92). In this regard, the role of practitioners becomes crucial in helping to facilitate and promote the economic development of such places through the promotion of economic sustainability practices in the delivery of their sustainable regeneration projects.

6.14 Promoting Local Community Organisations/Enterprises

The results in Table 6.3 also reveal that practitioners were promoting local community organisations/enterprises in the communities where their regeneration projects were located. Specifically, 9 (42.9%) of the 21 practitioners who participated in the interviews for the study were found to be given a very high/high degree of consideration to promoting local community organisations/enterprises, while 12 (57.1%) other practitioners were also given some/limited degree of consideration to promoting local community organisations/enterprises. The majority of practitioners, and in particular those who were giving very high/high consideration, were of the view that doing so was another means for them to fulfil their corporate responsibilities for the communities where they were delivering their projects. As one of them indicated:

…We always try to help local community organisations, and we see that as a very important aspect of meeting our corporate responsibilities to these communities. We have a dedicated

person whose work is to liaise with these community organisations, and identify the kind of supports we need to provide for them.

Highlighting further on the practices which they were applying to promote the local organisations and enterprises, many of them indicated that they were helping to provide them with office accommodation and facilities, and also helping to provide money for those who were struggling financially to pay their rents. By doing so, they believed was helping these organisations to expand their businesses and become economically sustainable for their communities. This view was also echoed by CLG (2008) and HM Treasury (2007).

In the case of the questionnaire survey results (Table 6.4) obtained from 193 practitioners in relation to the aforementioned economic sustainability factor, 77.7% of practitioners were given a very high/high degree of consideration to promoting local community organisations, compared to 20.2% of them who were also given some/limited level of consideration to promoting this economic sustainability factor. The results (Table 6.4) further reveal that 2.1% of practitioners were not given any consideration at all to promoting this economic factor on their projects.

From the above findings, it is clear that the questionnaire survey results did not support the interview results. The 77.7% 'very high/high' result of the questionnaire survey can be seen to be contrary to the 42.9% 'very high/high' result obtained from the interviews. One possible reason which can be attributed to this could be the size of the population used for the interviews and the questionnaire survey studies. It could also be that the practitioners who participated in the interviews were more frank in stating their views on this, compared to those who responded to the questionnaire survey. Similarly, the financial cost elements associated with the promotion of community organisations' activities could also be attributed to the outcome of these interview findings. A considerable financial cost according to CLG (2008), could dictate the level of investment in community organisations. Although the interview results appear to be disappointing, it can be observed that all the 21 practitioners were promoting this economic sustainability factor, compared to 2.1% of practitioners who were not promoting this economic sustainability factor at all on their projects. However, it can be said that although the 'very high/high' interview result appears to be below expectation, the overall interview and questionnaire survey results give a positive indication towards a higher level of future consideration and promotion of this economic sustainability factor.

6.15 Summary

The Chapter presented the analysis and discussion on social and economic sustainability factors and documented the following findings and recommendations.

The findings of the social sustainability factors revealed that all the 21 practitioners who participated in the semi-structured interviews were found to be given a very high/high level of consideration to health and safety factors on their regeneration projects. This was also backed by over 88% of practitioners who participated in the questionnaire survey phase of the study. It was deduced from the findings that the introduction of health and safety legislations by the UK government to regulate health and safety practices within the UK construction industry, had played a major role in ensuring that good health and safety regulations and procedures were adhered to by practitioners. Similarly, the emergence of the considerate contractor scheme and the establishment of Health and Safety Executives (HSE) were also said to have contributed to practitioners' quests to promote good health and safety practices on their projects. The considerate contractor scheme and HSE both set standards and performance targets on which practitioners' health and safety performances are measured. Since practitioners were aware of the potential consequences and the various sanctions in the case of any violation of such legislations and non-performance, it was suggested that they were more likely to promote health and safety practices than other social sustainability factors on their projects. Various other efforts initiated by the UK government to improve on health and safety practices within the construction industry were said to have also contributed to these findings. Notable among them were the Rethinking Construction Committee Egan (1988) and DETR (2000) reports, which raised a number of concerns about poor health and safety practices and the potential dangers such poor practices were posing to the entire construction industry towards the delivery of sustainable construction objectives. All these initiatives, the author believes, have contributed to the findings of this study.

The findings further revealed that 18 (85.7%) of the 21 practitioners who participated in the interviews were given a very high/high degree of consideration to promoting education and training/apprenticeships on their regeneration projects. 3 (14.3%) of the 21 practitioners were also given some/limited consideration to promoting the aforementioned social sustainability factor on their regeneration projects. The questionnaire survey findings on the other hand, indicated that of the 193 practitioners who responded, over 80% of them were found to be given a very high/high degree of consideration to promoting education and training

opportunities, compared to 17.6% of them who were given some/limited degree of consideration to promoting the aforementioned social sustainability factor. The findings further suggested that about 2% of practitioners were not given any consideration to promoting education and training opportunities at all on their regeneration projects. Although the findings were generally good, the author was of the view that the majority of practitioners were only promoting education and training opportunities on their projects to satisfy the requirements of the contracts, and not because they believed it was an important factor towards the achievement of the social regeneration objectives. One major issue the author felt could have serious implications on the quality of education and training schemes provided by practitioners was the duration (start – finish) of the projects. Since the education and training schemes were often tied up to the duration of the projects, the author advised practitioners to take cognisance of this when planning their education and training programmes, to ensure that they were well planned to match the projects' durations as well as the individuals' training requirements. In view of this, the author further recommended trainees' transfer schemes which could be introduced for trainees who were unable to complete their training programmes due to the limited duration of a particular regeneration project. The author was of the view that the introduction of such a trainee transfer scheme will enable such trainees to be transferred to another project (which may not necessarily be with the same practitioner they began their training with), to complete their training.

The findings from the Chapter also indicated that 17 (81.0%) of the 21 practitioners who participated in the interviews were given a very high/high degree of consideration to promoting the provision of affordable housing-led regeneration, while 4 (19.0%) other practitioners were also given some/limited degree of consideration to promoting the aforementioned social sustainability factor. From the questionnaire survey findings, it was observed that over 85% of them were given a very high/high degree of consideration to promoting affordable housing-led regeneration, compared to 14.0% of them who were also given some/limited degree of consideration to promoting the above mentioned social factor. The findings also suggested that 1.5% of practitioners were not given any degree of consideration at all to promoting the housing-led regeneration projects. Based on these findings, it was concluded that the majority of UK regeneration practitioners were of the view that providing affordable housing-led regeneration was a major means of meeting the social sustainability needs of communities.

The findings also revealed that 16 (76.2%) of the 21 practitioners who participated in the interviews were given a very high/high degree of consideration to promoting stakeholder participation on their regeneration projects, while 5 (23.8%) other practitioners were also given some/limited degree of consideration to the aforementioned social sustainability factor on their projects. In the questionnaire survey findings, 79.0% of practitioners were given a very high/high degree of consideration to promoting stakeholder participation, compared to 19.4% of them who were given some/limited consideration to promoting this social sustainability factor on their projects. Similarly, 1.6% of practitioners were also observed not to be given any consideration to promoting the aforementioned social sustainability factor at all on their projects. Although the findings were seen to be positive, the author attributed it to the current demand for greater stakeholder (community) participation, particularly on public funded regeneration projects. It was also suggested that practitioners who were adequately promoting stakeholder's (community) participation were less likely to encounter opposition or vandalism on their projects. It was further suggested that the community groups that were fully participating in the delivery of the projects were more likely to be useful resources for policy makers and practitioners to tap their knowledge for future regeneration projects in their communities.

It was observed that out of the 21 practitioners who took part in the interview phase of the study, 15 (71.4%) of them were also given a very high/high degree of consideration to promoting the social sustainability factor relating to community security/wellbeing on their regeneration projects, while 6 (28.6%) of them were also given some/limited degree of consideration to the above mentioned social factor on their projects. The findings from the questionnaire survey also indicated that 82.4% of practitioners were given a very high/high level of consideration to promoting community security/wellbeing, compared to 15.5% of them who were given some/limited level of consideration to promoting security/wellbeing issues on the projects. The findings further indicated that 2.1% of them were not considering the promotion of the aforementioned social factor at all on their projects.

It was also discovered that 12 (57.1%) of the 21 practitioners who took part in the interviews were given a very high/high degree of consideration to promoting the social factor relating to the physical environment on their regeneration projects, while 9 (42.9%) other practitioners were given some/limited degree of consideration to promoting the above mentioned social sustainability factor on their projects. The findings obtained from the 193 practitioners who

took part in the questionnaire survey phase of the study also revealed that 74.1% of practitioners were given a very high/high degree of consideration to promoting the physical environment, compared to 25.4% of them who were given some/limited degree of consideration to promoting the aforementioned social factor on their projects. The results also showed that 0.5% of practitioners were not given any degree of consideration at all to promoting this social factor on their projects.

In the case of the economic sustainability factors, the findings revealed that 20 (95.2%) of the 21 practitioners who participated in the semi-structured interviews were given a very high/high degree of consideration to promoting value for money on their regeneration projects, while only 1(4.8%) practitioner was also found to be given some/limited level of consideration to promoting this economic sustainability factor. Also, of the 193 practitioners who took part in the questionnaire survey phase of the study, it was discovered that over 88% were given a very high/high degree of consideration to promoting value for money, compared to 10.7% of them who were also given some/limited degree of consideration to it. However, only 1.0% of practitioners were found not be given any degree of consideration at all to promoting this aforementioned economic factor. Although it was observed that the majority of practitioners who participated in the interview were linking their value for money practices to their monetary objectives, the overall responses which outlined their value for money practices for their regeneration projects were said to be positive.

The findings also suggested that 18 (85.7%) of the 21 practitioners who took part in the semi-structured interviews were given a very high/high degree of consideration to promoting profitability issues on their regeneration projects, while 3 (14.3%) other practitioners were also given some/limited degree of consideration to promoting the above mentioned economic factor on their projects. The questionnaire survey findings on the other hand, discovered that of the 193 practitioners who responded to the questionnaire survey, 85.1% were given a very high/high degree of consideration to promoting profitability, compared to 13.9% who were also given some/limited degree of consideration to it on their projects. The findings further revealed that 1.0% of practitioners were not given any level of consideration to promoting the aforementioned economic factor at all on their projects. It was noticed that the majority of practitioners were considering profitability as the means for them to recoup their monies invested in the projects. Drawing from the findings, it was suggested that the current practices

which were being considered to deliver the economic sustainability factors of sustainable regeneration were over-shadowed by practitioners' economic sustainability interests.

The findings from the Chapter also indicated that 16 (76.2%) of the 21 practitioners who took part in the semi-structured interviews were given a very high/high consideration to promoting employment opportunities on their projects, while 5 (23.8%) of them were also given some/limited degree of consideration to promoting the above mentioned economic sustainability factor on their projects. It further revealed that 80.0% of practitioners who participated in the questionnaire survey were given a very high/high degree of consideration to promoting employment opportunities, compared to 19.0% who were also given some/limited level of consideration to promoting employment opportunities on their projects. The questionnaire survey findings also suggested that 1.0% of practitioners were not given any level of consideration at all to promoting employment opportunities on their projects. The findings also gave an indication that the majority of practitioners were currently employing people on their regeneration projects, which the author considered to be encouraging and refreshing. It was further suggested that the findings could possibly encourage the UK government to invest more in sustainable regeneration projects to help reduce unemployment rates within the communities, and which could also lead to increasing the prospect of future regeneration projects/activities for practitioners and the communities.

The findings also revealed that 13 (61.9%) of the 21 practitioners who were involved in the semi-structured interviews were given a very high/high level of consideration to promoting the economic growth of the local areas, while 7 (33.3%) of them were also given some/limited level of consideration to the above economic factor on their projects. In terms of the questionnaire survey, the findings indicated that 66.5% of them were given a very high/high degree of consideration to promoting economic growth of the local areas, compared to 32.0% of them who were also given some/limited degree of consideration to it. However, it was noticed that 1.5% of practitioners were not given any consideration to promoting the aforementioned economic factor at all on their projects.

Finally, it was discovered from the Chapter that 9 (42.9%) of the 21 practitioners who participated in the interviews were given a very high/high degree of consideration to promoting local community organisations and enterprises, while 12 (57.1%) of them were also given some/limited degree of consideration to promoting the aforementioned economic

sustainability factor. Similarly, of the 193 practitioners who responded to the questionnaire survey, 77.7% of them were found to have been given a very high/high degree of consideration to promoting local community organisations and enterprises, compared to 20.2% of them who were also given some/limited level of consideration to promoting this economic factor. Also, 2.1% of them were not given any consideration at all to promoting this economic factor on their projects. It was observed that the questionnaire survey findings were not in agreement with the interview findings. One possible reason which was attributed to this was the size of population from which both data was taken. However, the author was of the view that the overall findings provided a positive indication towards a higher level of future consideration and promotion of the above mentioned economic sustainability factor. The next Chapter presents the data analysis and discussion on organisational social and economic sustainability barriers of sustainable regeneration projects in the UK.

CHAPTER 7 THE ORGANISATIONAL SOCIAL AND ECONOMIC SUSTAINABILITY BARRIERS OF SUSTAINABLE REGENERATION PROJECTS

7.1 Introduction

This Chapter builds on the findings from the previous Chapter and also addresses objective 5 of the study. It is concerned with the analysis and discussion of seven (7) socio-economic sustainability barriers identified to be impeding practitioners to adopt and implement the social and economic sustainability factors in their regeneration projects. It commences with a brief background literature on the socio-economic sustainability barriers and goes on to present the data analysis of the semi-structured interviews obtained from 21 practitioners. This is followed by data analysis from the questionnaire survey obtained from 193 practitioners. The analyses and discussions are supported by literature findings. A correlation test analysis is also presented to establish a relationship between the top three barriers ranked by practitioners. Finally, the findings and recommendations of the Chapter are outlined.

According to Matar *et al.* (2008), despite the numerous potential benefits identified with the sustainability principles, there are many barriers that contribute to impeding sustainability from being the standard trend of construction industry practice. Several other authors have attributed the slow response to adapting to a new way of delivering sustainable construction products to a number of barriers. Authors like Kraus and Britzelmaier (2012); Presley and Meade (2010); and Carter and Fortune (2007), for example, have identified barriers with the sustainability policy objectives of many organisations. They related some of these barriers to the conflicting nature of the organisations' sustainability objectives, vis-a-vis their commercial-oriented approaches that were underlying the policy objectives of these organisations. According to Lombardi *et al.* (2011) and Van Bueren and De Jong (2007), the limited understanding of the numerous benefits associated with sustainability, coupled with the lack of a strong business case for sustainability, have played a significant role in making sustainability not being adopted and implemented adequately in practice as required.

In terms of delivering sustainable regeneration in the UK, these barriers have played a major role in determining how the social and economic sustainability factors have been articulated and incorporated in many regeneration projects by practitioners. Hence, it is logical to suggest that the current level of adoption and implementation of the socio-economic sustainability

factors on sustainable regeneration projects can be said to be a reflection of these barriers. Indeed, it is believed that if future regeneration projects are to deliver their intended sustainability objectives, then it is crucial that adequate emphasis is given to addressing these underlying barriers that have the potential to hinder the successful delivery of socio-economic sustainability aspects of regeneration projects (CLG, 2008). The way and manner practitioners respond to addressing such barriers will largely determine how the social and economic sustainability facets of the projects will be delivered to benefit them and their entire stakeholders.

As indicated above, the main objective of the Chapter is to explore the social and economic sustainability barriers considered to be impeding the adoption and implementation of social and economic sustainability factors in sustainable regeneration projects in the UK. To achieve this objective, the study conducted semi-structured interviews with 21 practitioners (see Chapter 3) from three selected construction organisations involved in the delivery of sustainable regeneration projects in the UK. The study further collected data from 193 practitioners who participated in the questionnaire survey phase of the study. From the initial analysis of the semi-structured interviews, it was observed that there were two main categories of responses from practitioners, as presented in Table 7.1.

The initial analysis of the interviews revealed that all the 21 (100%) practitioners unanimously indicated that lack of funding/financial support was a very significant/significant barrier which was impeding them to adopt and implement socio-economic sustainability factors in their regeneration projects. 19 (90.5%) of the 21 practitioners were of the view that 'unfavourable contract requirement/condition' was a very significant/significant barrier, while the remaining 2 (9.5%) of them were also of the view that it was some/limited significant barrier to their socio-economic sustainability practices. The results (Table 7.1) further showed that 18 (85.7%) of the 21 practitioners were very significantly/significantly impeded by, 'lack of client willingness to adopt sustainability', while 3 (14.3%) other practitioners have found it as some/limited significant barrier for them to adopt and implement the socio-economic sustainability factors on their projects. Similarly, 15 (71.4%) of the 21 practitioners were of the opinion that the perceived cost of sustainability was a very significant/significant barrier, while the remaining 6 (28.6%) practitioners were also of the opinion that it was some/limited significant barrier to their socio-economic sustainability practices. Also, 13 (61.9%) of the 21 practitioners have indicated that 'conflicts with organisation business objectives' was a very

significant/significant barrier for them, while 8 (38.1%) other practitioners found it as some/limited significant barrier to their socio-economic sustainability practices. Furthermore, 12 (57.1%) of the 21 practitioners have identified 'conflict with stakeholder interest' as a very significant/significant barrier which was impeding them, while 9 (42.9%) practitioners were of the view that it was some/limited significant barrier to their socio-economic sustainability practices. Finally, 8 (38.1%) of the 21 practitioners were of the view that 'socio-economic sustainability not a priority for our organisation' was a very significant/significant barrier, while 13 (61.9%) other practitioners have considered it as some/limited significant barrier for them to adopt and implement the social and economic sustainability factors in their regeneration projects.

Table 7.1: Semi-structured interview results of the social and economic sustainability barriers

Barriers	Practitioners Total N = 21	
	a*: Very significant /significant	**b**: Some / limited significant
Lack of funding/financial support (LFS)	21 (100%)	-
Unfavourable contract requirements/conditions (UCR)	19 (90.5%)	2 (9.5%)
Lack of client willingness to adopt sustainability (LCWAS)	18 (85.7%)	3 (14.3%)
Perception that sustainability is costly (PSC)	15 (71.4%)	6 (28.6%)
Conflicts with our organisation business objectives (COBO)	13 (61.9%)	8 (38.1%)
Conflict with stakeholder interest (CSI)	12 (57.1%)	9 (42.9%)
Socio-economic sustainability not a priority for our organisation (SESNPO)	8 (38.1%)	13 (61.9%)

a*: number and percentage of practitioners who either responded very significant or significant. **b**** : number and percentage of practitioners who either responded some significant or limited significant.

In the case of the questionnaire survey, the initial analysis of the results (Table 7.2) indicated that 85.2% of the 193 practitioners who responded were very significantly/significantly impeded by 'lack of funding/financial support', compared to 12.8% of them who have found it as some/limited significant barrier for them. However, 2% of practitioners on the other hand, have found it as not being a significant barrier at all for them to adopt and implement socio-economic sustainability factors in their regeneration projects. The results also suggested that 82.1% of practitioners were of the opinion that 'unfavourable contract requirement/condition' was a very significant/significant barrier, compared to 15.9% who

indicated that it was some/limited significant barrier to their socio-economic sustainability practices. Also, 2.1% of practitioners responded that it was not a significant barrier to their socio-economic sustainability practices. Additionally, 79.6% of practitioners were very significantly/significantly impeded by 'lack of client willingness to adopt sustainability', compared to 18.0% of them who regarded it as some/limited significant barrier to their socio-economic sustainability practices. Moreover, 2.6% of practitioners also did not find it as a significant barrier at all. The results in Table 7.2 further revealed that 73.6% of practitioners were of the view that the 'perception that sustainability is costly' was a very significantly/significantly hindering their socio-economic sustainability practices, compared to 23.7% of them who also indicated that it was some/limited significant barrier to their socio-economic sustainability practices. However, 2.7% of them did not find it as a significant barrier at all to adopting and implementing socio-economic sustainability factors in their regeneration projects. Furthermore, of the 193 practitioners, 65.9% of them have found 'conflicts with our organisation business objectives' as a very significant/significant barrier, compared to 30.0% who have also found it as some/limited significant barrier to their socio-economic sustainability practices. Also, 4.1% of them did not find it as being a significant barrier at all to their socio-economic sustainability practices. The questionnaire survey results further suggested that 47.7% of practitioners were very significantly/significantly hindered by 'conflict with stakeholder interest', compared to 45.6% of them who have indicated that it was some/limited significant barrier to their socio-economic sustainability practices. Again, 6.7% of them also indicated that it was not a significant barrier at all for them to adopt and implement socio-economic sustainability factors in their projects. Finally, 66.3% of practitioners were of the view that 'socio-economic sustainability not a priority for our organisation' was a very significant/significant barrier, compared to 26.8% of them who also believed that it was some/limited significant barrier to their socio-economic sustainability practices. However, 6.9% of them were of the opinion that it was not posing any significant barrier for them at all to adopt and implement socio-economic sustainability in their regeneration projects.

Table 7.2: Questionnaire survey results of the social and economic sustainability barriers

Barriers	Very significant	Significant	Some significant	limited significant	Not at all significant
Lack of funding/financial support (LFS)	46.3%	38.9%	7.0%	5.8%	2.0%
Unfavourable contract requirements /conditions (UCR)	31.5%	50.6%	8.6%	7.3%	2.1%
Lack of client willingness to adopt sustainability (LCWAS)	44.7%	34.9%	10.7%	7.3%	2.4%
Perception that sustainability is costly (PSC)	14.0%	59.6%	15.5%	8.2%	2.7%
Conflicts with our organisation business objectives (COBO)	18.1%	47.8%	17.5%	12.5%	4.1%
Conflict with stakeholder interest (CSI)	14.0%	33.7%	36.8%	8.8%	6.7%
Socio-economic sustainability not a priority for our organisation (SESNPO)	17.6%	48.7%	12.4%	14.4%	6.9%

7.2 Lack of Funding/Financial Support

An inspection of Table 7.1 reveals that all the 21 practitioners who participated in the semi-structured interviews have indicated that lack of funding/financial support was posing a very significant/significant barrier for them to adopt and implement social and economic sustainability factors on their projects. Generally, the barriers presented by pursuing sustainable regeneration are often summarised in financial terms, particularly during this economic crisis (Parkinson *et al.*, 2009). This point was strongly highlighted by practitioners during the interview discussions. They were of the view that the absence of funds/financial support was impeding them, and in most cases, dictating the way and manner they were going about adopting and implementing the social and economic sustainability factors on their regeneration projects. As one practitioner for example clearly stated:

…From a social and economic point of view, our major barrier is clearly financial especially looking at the economic crisis we are in at the moment. There is lack of financial support out there for us to have access for these things. …And this is a big barrier for us, which is limiting us in a number of ways we are going about adopting and implementing these things on our projects.

This view was also acknowledged by Parkinson *et al.* (2009) who have indicated that the unavailability and inability to access funding, especially during this economic crisis, was a major barrier which was impacting on the delivery of community regeneration programmes.

Consequently, in order to obtain a complete picture to validate the views expressed by the 21 practitioners who took part in the semi-structured interviews, the study also obtained data from 193 practitioners who participated in the questionnaire survey phase of the study. The results obtained in Table 7.2 show that 85.2% of the 193 practitioners who responded to the questionnaire survey, were very significantly/significantly impeded by 'lack of funding/financial support', compared to 12.8% of them who were of the view that it was some/limited significant barrier to adopt and implement socio-economic sustainability in their regeneration projects. However, the results also reveal that 2% of practitioners were not finding the 'lack of funding/financial support' as a significant barrier at all for them to adopt and implement socio-economic sustainability factors in their regeneration projects.

From the above results, it can be argued that the over 85% 'very significant/significant' questionnaire survey result obtained has validated the 100% 'very significant/significant' result obtained from the semi-structured interviews. This finding is also not surprising, as it was observed from the literature review in Chapter 2 as well as from the earlier findings in Chapters 5 and 6 that the majority of practitioners were relating their sustainability practices to their monetary objectives. Notably, this finding has an implication on the delivery of the social and economic sustainability aspects of the projects. On the economic sustainability side, the lack of financial/funding support could result in practitioners' inability to procure locally, both labour and materials. Socially, it could also impact on practitioners' capacity to provide adequate and effective skills training/apprenticeship opportunities to local people on their projects. In the literature review, authors like DBIS, 2013; Kraus and Britzelmaier (2012); Haran *et al.* (2011); Carpenter (2011); Pitt *et al.* (2009); and EPH (2008) have indicated that the lack of access to financial support was one of the major barriers cited by many practitioners which, in their view was preventing them from fully taking on sustainability factors and appropriately integrating them into their projects.

Although the lack of financial support has been well reported as a major barrier, it can be said that the present economic conditions have worsened the situation, as indicated by Parkinson *et al.* (2009). This position was further supported by Haran *et al.* (2011), who also argued that the inability to access financial support for many sustainable regeneration projects was partly due to the economic crisis. The views expressed by DBIS (2013), Haran *et al.* (2011) and Parkinson *et al.* (2009), which have been reinforced by this study, could be the reason for the UK government's inability to provide adequate financial support to practitioners to undertake

regeneration projects. Similarly, the dissolution of regeneration delivery partnerships schemes such as the New Deal for Communities (NDC) and the Neighbourhood Renewal Fund (NRF) among others, could also be said to have played a role in limiting funding streams for regeneration projects. In the recent past, these partnerships schemes were the main vehicle which the UK government was using to provide funding for many sustainable regeneration projects in the UK. They were very instrumental in helping to provide funding support to enable many practitioners to deliver regeneration projects.

In a study reported by CLG (2009), the majority of respondents were of the view that access to funding support was a very important aspect and which was needed to enable regeneration providers to continue to deliver sustainable regeneration benefits for communities. However, to ensure that future regeneration projects deliver their socio-economic benefits, it is crucial that adequate funding sources are made available to practitioners to support them to deliver these benefits for communities. Access to financial support for regeneration practitioners should be seen as an important factor, if the adoption and implementation of social and economic sustainability factors are to be successful in the delivery of regeneration projects. It is suggested that the difficulty in securing adequate funding support will put even good development projects in jeopardy (Parkinson *et al,* 2009). Hence, it is important that government/policy makers are made aware of such difficulties, as the lack of funding support could result in serious implication towards the delivery of successful sustainable regeneration. In view of this, it is essential that the government, together with other regeneration organisations, begin to explore other funding methods and sources beyond the conventional funding sources and approaches which are currently being employed to deliver sustainable regeneration projects in the UK. The discovery of such new funding sources could be instrumental in providing funding support, and also encourage practitioners who may particularly be limited by financial resources or who may be seen not to be fully committed to sustainability objectives, to adopt and implement sustainability factors in their regeneration projects.

7.3 Unfavourable Contract Requirements/Conditions

Another major barrier confronting practitioners in pursuing the sustainability agenda also emanates from the contracts' requirements from which regeneration projects are delivered. A further examination of Table 7.1 reveals that 19 (90.5%) of the 21 practitioners who took part in the semi-structured interviews were of the view that 'unfavourable contract

requirements/conditions' was a very significant/significant barrier, while the remaining 2 (9.5%) practitioners were also of the opinion that it was posing some/limited significant barrier for them to adopt and implement the socio-economic sustainability factors in their regeneration projects. During the interview discussions, practitioners emphasised that the contracts' conditions of most of the sustainable regeneration projects they were delivering, were requiring them to adopt and implement socio-economic sustainability factors that were not favourable to them. Typically, one practitioner for instance indicated this by saying:

…We do encounter significant barriers on our regeneration projects, in so far as contracts' conditions continue to compel us to do certain things which are not favourable for us as practitioners. Most often contracts' requirements make certain demands which make things very difficult for us to deliver our sustainability commitment for the projects. …Most contracts want us to take on certain number of trainees, which obviously affect our time, cost and quality commitments for the projects. …Because we've got to provide people to properly supervise these guys, which in most cases do put a lot of pressures on our programme. Obviously that becomes a major barrier for us. This position was also echoed by CECGP (2001).

However, in order to complement the above semi-structured interview results, a further study was carried out using a questionnaire survey approach which collected data from 193 practitioners. The results obtained (Table 7.2) show that 82.1% of practitioners were of the opinion that 'unfavourable contract requirements/conditions' was a very significant/significant barrier, compared to 15.9% of them who also indicated that it was some/limited significant barrier for them. The results further show that 2.1% of practitioners who responded to the questionnaire survey, did not find 'unfavourable contract requirements/conditions' as a significant barrier at all for them to adopt and implement social and economic sustainability practices in their regeneration projects.

Apparently, the over 82% 'very significant/significant' questionnaire survey result can be said to have complemented the 90.5% 'very significant/significant' result obtained from the semi-structured interviews. The findings are also in line with the works of RICS Europe (2013); Kraus and Britzelmaier (2012); Häkkinen and Belloni (2011); and Drews (2010). In their works, they maintained that the contacts' requirements underlying the delivery of sustainability projects were major determining factors towards the adoption and

implementation of sustainability principles in the projects. They went on to argue that practitioners' attitudes and approaches towards sustainability in most cases were based on the nature of the contracts' conditions which were underlying the delivery of such sustainability projects.

From these findings, it can be concluded that the majority of practitioners' who are currently involved in delivering sustainable regeneration projects in the UK find contracts' requirements as a very significant or significant barrier for them to adopt and implement socio-economic sustainability factors in their regeneration projects. It can be deduced that the usual conflict of interest, which has always existed between meeting practitioners' own objectives and fulfilling the projects' requirements, could have also accounted for these findings. For many clients, the inability to meet their projects' time, quality and cost requirements can lead to practitioners paying heavy damages. Hence, most practitioners may be more likely to consider contracts' requirements as a very significant/significant barrier, as reflected in the findings of this present study. This finding could also have serious implications for the successful adoption and implementation of social and economic sustainability aspects of the projects. In economic sustainability terms, it could impact on the generation of employment, while socially, it could also impact on the number, nature and quality of skill training opportunities provided by practitioners on their regeneration projects. Similarly, in an attempt to avoid paying any damages, practitioners may end up adopting and implementing only the social and economic sustainability factors that may enable them to meet such contracts' requirements for the projects.

The finding from the present study also provides a useful source of information for policy makers who are responsible for formulating policies and strategies for sustainable regeneration programmes in the UK. Since the UK government is a major client and a provider of regeneration projects, it is important that adequate strategies are put in place to ensure that the interests of practitioners are also taken into consideration when formulating the requirements for their regeneration projects. Similarly, it is important that the contents of any contract document meant to deliver sustainable regeneration projects is worded in a way that is not seen or perceived as being geared towards only the clients' requirements. It is argued that contracts' requirements worded in favour of one party, could potentially deter other parties from working effectively on the projects. In the case of sustainable regeneration projects, if such contracts requirements are seen to be unfavourable to practitioners who are

involved in their delivery, it could undermine their efforts, leading to the reduction in the scope of the social and economic sustainability factors for the projects.

7.4 Lack of Client Willingness to Adopt Sustainability

The analysis of the semi-structured interviews revealed that the lack of client willingness to adopt sustainability principles was also impeding practitioners' sustainability practices. A closer observation of the results in Table 7.1 suggests that 18 (85.7%) of the 21 practitioners interviewed were finding the 'lack of client willingness to adopt sustainability' as a very significant/significant barrier. The remaining 3 (14.3%) of the 21 practitioners were also finding the aforementioned issue (barrier) as some/limited significant barrier for them to adopt and implement socio-economic sustainability factors in their sustainable regeneration projects. During the interview discussions, the majority of practitioners made it clear that the inability of clients to accept sustainability as an integral part of sustainable regeneration and make provision for it was a major challenge they were facing to adopt and implement the socio-economic sustainability factors in their projects, as one practitioner for instance, indicated by saying:

…I will say, lack of willingness on the part of clients to pay a bit more for this to happen, and this is part of the challenges we are facing as practitioners to adopt and implement this social and economic sustainability stuff we are taking about. These things come as added value and take a lot of time and resources to provide them and if we are left on our own to provide them, that becomes a significant barrier for us. So we need their commitments. This position was also acknowledged by Khalfan (2006).

From this response it can be suggested that with adequate support from clients, practitioners may be more likely to adopt and implement social and economic sustainability factors than they are doing currently. In an attempt to validate the views expressed by practitioners during the interviews, a questionnaire survey was further conducted with 193 practitioners. The results obtained (Table 7.2) indicate that 79.6% of practitioners were finding the 'lack of client willingness to adopt sustainability' as a very significant/significant barrier, compared to 18.0% who were also finding it as some/limited significant barrier to their socio-economic sustainability practices. However, the results further reveal that 2.6% of practitioners were not finding 'lack of client willingness to adopt sustainability' as a significant barrier at all to adopt and implement sustainability on their regeneration projects. The nearly 80% 'very

significant/significant' views expressed by practitioners through the questionnaire survey, can be said to have validated the 85.7% 'very significant/significant' views obtained from practitioners who took part in the semi-structured interviews. The finding strongly corroborates Pitt *et al.'s* (2009) study, in which the majority of practitioners were of the view that the lack of expressed demand of sustainability from clients was the most significant barrier for them to adopt and implement sustainability on their projects. In the earlier work of the Reed Research Group which was cited in Matar *et al.* (2008), it was also discovered that only 32% of construction clients were showing an interest in pursuing sustainability on their projects.

It is noteworthy to point out that the findings from this barrier has implications for the adoption and implementation of a range of social and economic sustainability factors (including those stated in the previous sections) for the projects. This finding could dampen the spirit of practitioners, and negatively impact on the way they go about adopting and implementing the social and economic sustainability features in their regeneration projects. The findings of the present study, together with the previous ones cited above, provide evidence to suggest that the majority of clients are still construing sustainable regeneration projects as just being the 'normal' traditional construction projects they have been used to, in that they are still aligning the success of the projects to the time, cost and quality deliverables. This also means they have only been considering sustainability as a by-product or add-on activity of the projects. As per the above findings, it is apparent that the awareness and knowledge of clients about the composition of sustainable regeneration projects will have to be enhanced. Clients should be made to understand that the measure of success of sustainable regeneration projects goes beyond the time, cost and quality deliverables, to include the social and economic sustainability deliverables of projects. Equally, they should be made aware of the medium to long term benefits associated with sustainability. Doing so could potentially help them to get a better understanding and change their mind-set and attitude towards the adoption and implementation of the social and economic sustainability factors on their regeneration projects. The author is of the view that practitioners, policy makers and academia could be instrumental in helping to create such awareness to enable clients to appreciate the main composition of sustainable regeneration projects. Similarly, it is crucial that practitioners who are engaged by clients to deliver regeneration projects, demonstrate adequately to them that they are able to deliver their primary objectives, alongside the socio-economic

sustainability objectives of their projects. Doing so could also go a long way to alter clients' attitudes towards a greater adoption of sustainability factors in their regeneration projects.

7.5 Perception that Sustainability is Costly

Another issue identified as a major barrier towards the adoption and implementation of sustainability was the perceived cost associated with sustainability factors. The interview results obtained (Table 7.1) reveal that 15 (71.4%) of the 21 practitioners believed that the perceived cost of sustainability was a very significant/significant barrier, while the remaining 6 (28.6%) of the 21 practitioners also held the view that it was some/limited significant barrier to their quests to adopt and implement the social and economic sustainability factors in their regeneration projects. Attempts to pursue sustainability practices have been undermined by the perceived cost which is often attached to sustainability. For most construction industry practitioners, such cost perception influences and determines how sustainability issues are articulated on their projects. It is an indisputable fact that such cost perception has contributed to the way and manner sustainability issues have been pursued on a number of regeneration projects, as one practitioner clearly demonstrated during the interview discussions by saying:

…Cost perception of sustainability is definitely a significant barrier, whether rightly or wrongly, the perception is still out there among us as practitioners. And obviously when you are to deliver sustainable regeneration and you have a tight budget; that might affect the way you would want go about adopting and implementing the social and economic sustainability factors on the project.

The attempt to align sustainability with high cost of production has long been cited as a reason why many regeneration providers were paying lip service to adopting and implementing sustainability factors in their projects (Häkkinen and Belloni, 2011). In order to validate the semi-structured interview results, a questionnaire survey was further conducted with 193 practitioners who have responded to the questionnaire survey for the present study. The results obtained (Table 7.2) show that 73.6% of practitioners were of the view that 'perception that sustainability is costly' was a very significant/significant barrier, compared to 23.7% of them who also indicated that it was some/limited significant barrier for them to adopt and implement sustainability practices. The results (Table 7.2) further reveal that 2.7% of practitioners were not finding it as a significant barrier at all to adopt and implement sustainability factors in their projects. Drawing from the results, it can be observed that the

73.6% 'very significant/significant' questionnaire survey result obtained has validated the 71.4% 'very significant/significant' result obtained from the semi-structured interviews. As per the finding, it can be concluded that the perceived cost of sustainability is a major barrier for regeneration practitioners, currently in the UK. The findings of the present study is also not surprising, as the perception of high cost of investment and lower investment returns for sustainable construction are often seen as barriers for the adoption and implementation of sustainability by many practitioners (Häkkinen and Belloni, 2011; Lam *et al.*, 2009). The complex nature and the uncertainty surrounding sustainability issues, coupled with the profit-oriented approach often adopted by practitioners, can be said to have fed into this perception. Generally, construction industry practitioners are averse to taking risks that have the potential to financially impact on their operations. Similarly, the fact that the delivery of sustainable regeneration projects is also considered to be consisting of a number of complex processes and activities, could also mean that practitioners could potentially perceive higher delivery cost for such complex processes and activities on the projects.

Seemingly, the findings of the present study could also have significant implications for the successful delivery of sustainable regeneration projects. Firstly, it has the potential to negatively impact on practitioners' performance and commitment to adopt and implement social and economic sustainability factors in their projects. Secondly, it also has the potential to negatively influence clients' commitment to fully embrace social and economic sustainability deliverables on their regeneration projects. However, it is believed that the cost perception can be overcome if practitioners take a long-term and holistic perspective of the overall benefits of delivering sustainability, as opposed to just taking a short-term view of the commercial risk which is usually associated with the initial cost of delivering the projects. Taking such a holistic sustainability view would not only provide the opportunity for practitioners to weigh up the short to long term cost-benefit implications of sustainability, but would also enable them to actually ascertain whether the high cost claims are real or they are just perceptions. This will then help them to respond to the perceptions accordingly.

7.6 Conflicts with our Organisation Business Objectives

A critical examination of the data obtained from semi-structured interviews also revealed that some practitioners were being hindered by their organisations' business objectives, in pursuing sustainability practices. From Table 7.1, it is observed that 13 (61.9%) of the 21 practitioners who were interviewed were of the view that adopting and implementing socio-

economic sustainability issues was very a significant/significant barrier, in that it was conflicting with their organisations' business objectives. The interview results further reveal that 8 (38.1%) of the 21 practitioners were of the opinion that adopting and implementing sustainability issues was also posing some/limited significant barrier on their organisations' business objectives. During the interview discussions, it became apparent that most of the practitioners' organisations were finding it difficult to fully integrate sustainability into their business operations. Their sustainability practices adopted were seen to be ad-hoc or incidental, rather than being embedded into their business practices, as was evident in a comment made by one of the practitioners:

…Adopting sustainability does present a significant barrier for our business objectives, especially when you have a lot of things to deal with as an organisation; it can significantly conflict with your primary business objectives. But what we try to do is to try and look at it on a project to project basis, because every regeneration project has its own dynamics and sustainability requirements.

The views of practitioners from a wider population was also sought to corroborate the views obtained from practitioners who participated in the semi-structured interviews phase of the study. To this end, questionnaire survey data was further obtained from 193 practitioners who responded to the questionnaire survey of the present study. Of the 193 practitioners, 65.9% of them have ranked 'conflicts with our organisation business objectives' as a very significant/significant barrier, compared to 30.0% of them who have ranked it as some/limited significant barrier to their socio-economic sustainability practices. The results further show that 4.1% of them were not finding it a significant barrier at all to adopt and implement the socio-economic sustainability factors in their projects. In comparing both findings in terms of their 'very significant/significant' responses, it can be seen that the 65.9% questionnaire survey result lend support to the 61.9% result obtained from the semi-structured interviews.

Although the finding seems disappointing, it is somewhat refreshing to observe that at least some practitioners still see socio-economic sustainability as not being a barrier and conflicting with their organisations' business objectives. It also gives an indication that this category of practitioners (4.1%) will be more likely to champion sustainability issues within their organisations. Again, the finding also confirms the assertion that the majority of practitioners who seem to be advocating the sustainability principles are still finding it very difficult to put

them into practice (Lombardi, *et al.*, 2010; Van Bueren and De Jong, 2007). The majority of construction organisations who participated in an earlier study conducted by Upstream (2005), were also seen to be recognising the importance of sustainability, yet they were found to be far away from achieving sustainability best practices. Some writers are of the view that the inability of practitioners to adequately pursue sustainability is due to the conflicting interests that are underlying their organisations' policy objectives (Carter and Fortune, 2007). These difficulties could be seen to be reflecting in the current adoption and implementation of social and economic sustainability factors in many sustainable regeneration projects. It can also be deduced that while the majority of current practitioners' organisations may be seen to be involved in sustainable regeneration activities, they may only be doing so to meet their short term monetary objectives. For most organisations, the commercial objective of profit making is seen to be dictating their business agenda (Kraus and Britzelmaier, 2012; Presley and Meade, 2010). However, the overall benefits of pursuing sustainability are said to exceed such short-term financial gains. It is observed in the literature review that there are other benefits (other than monetary) for organisations that are genuinely committed to championing the course of sustainability (Turcsanyi and Sisaye, 2013). Firstly, organisations that can demonstrate their commitments to delivering long-term sustainability benefits are more likely to differentiate themselves from others. Secondly, for such organisations, authors like Häkkinen and Belloni (2011) pointed out that incorporating sustainability into their business practices could lead to an enhancement of their reputation as best sustainability performing organisations, leading to an increase in their work outputs.

It is, however, important to suggest that if sustainability principles could become ingrained in practitioners' organisations' business practices, then practitioners formulating such business objectives will 'be expected to possess sustainability-relevant knowledge, skills and values' (Murray and Cotgrave, 2007: 13). This will largely enable them to overcome the conflict and challenges 'of developing an integrated and nuanced understanding of sustainability to translate the concept into implementation' (Lombardi, *et al.*, 2010: 274). The academic institutions, and professional and regulatory bodies also have a role to play in ensuring that they provide the right kind of sustainability training and programmes that ensure that future practitioners bring with them the levels of knowledge and skills that will equip them to deal effectively with such conflict issues in the context of sustainable regeneration projects (Murray and Cotgrave, 2007).

7.7 Conflict with Stakeholder Interest

The analysis of the semi-structured interviews (Table 7.1) further revealed that practitioners were also being impeded by stakeholder interest. Of the 21 practitioners who were interviewed, 12 (57.1%) have indicated that 'conflict with stakeholder interest' was a very significant/significant barrier which was impeding them, while the remaining 9 (42.9%) of the 21 practitioners have also cited it as some/limited significant barrier which was impeding them to adopt and implement social and economic sustainability factors in their regeneration projects. During the interview discussions, practitioners were of the view that their efforts to deliver regeneration projects were most often hindered by the need to meet various stakeholders' instructions and interests for the projects. This phenomenon, they indicated, was causing a significant barrier, which was hindering them from adopting and implementing socio-economic sustainability, as one practitioner clearly lamented by saying:

…Yes, there are always conflicts between what we want to deliver and what our stakeholders want to achieve from the projects. …And in a project such as regeneration where every stakeholder wants something from the project, that can be a significant barrier. This conflict is some of the barriers we always have to deal with which obviously prevents us to adopt and implement the social and economic sustainability issues on our projects. …We seem to be working under our stakeholders' instructions and interests, which is not good for us…

To validate the semi-structured interview results, a questionnaire survey was further carried out. The results obtained (Table 7.2) show that out of the 193 practitioners who responded to the questionnaire survey, 47.7% of them were very significantly/significantly hindered by 'conflict with stakeholder interest', compared to 45.6% of them who have indicated that it was some/limited significant barrier to their efforts to adopt and implement the social and economic sustainability aspects in their regeneration projects. The results (Table 7.2) further reveal that 'conflict with stakeholder interest' was not a significant barrier at all for 6.7% practitioners who participated in the questionnaire survey. Comparing both results in terms of their 'very significant/significant' results, it can be suggested that the questionnaire survey result did not validate the semi-structured interviews results. The disagreement in the results could be due to the size of population from which both data was taken. The less than 50% questionnaire survey's 'very significant/significant' result is refreshing and also gives an indication that the majority of practitioners are able to deal with stakeholders' interests on their projects. This notwithstanding, it is important that the over 57% 'very

significant/significant' interview result is not ignored, because issues relating to 'conflict with stakeholder interest' have the potential to dictate how social and economic sustainability factors that address the interests and needs of all the concerned stakeholders are adopted and implemented by practitioners on their sustainable regeneration projects. It is suggested that stakeholders' preferences can drive practitioners to pursue more sustainability principles (Lankoski, 2008). However, drawing from the overall findings (interview and questionnaire survey), it can be observed that a sizeable proportion of current regeneration practitioners in the UK are construing the stakeholders' interests as a barrier. The findings are not surprising, as issues involving sustainability vis-a-vis stakeholders' interests, have always being contested issues among practitioners (Mathur *et al.,* 2008). This suggests the need to ensure that practitioners gain an adequate understanding of the importance of addressing the sustainability needs of all their stakeholders. Practitioners should be aware that sustainable regeneration places importance on the delivery of shared sustainability benefits for all their stakeholders. This underscores the need to factor the interests of various stakeholder groups into the delivery of the projects. Presley and Meade (2010: 436) pointed out that any organisation 'pursuing sustainability must be aware of various stakeholders who influence or are influenced by sustainability decisions'. Apparently, there are also notable benefits for practitioners who are seen to be delivering the interests of their stakeholders. Upstream (2005) for example, argued that meeting the interests of the community could result in practitioners gaining community support for their future regeneration projects, while in the case of meeting funders' interests, it could potentially lead to practitioners' ability to attract future funding support from their funders. It can be suggested that developing a comprehensive sustainability strategy and approach that enables effective identification, engagement and understanding of various stakeholders' sustainability interests and needs, could help practitioners to effectively address such conflicts.

7.8 Socio-economic Sustainability not a Priority for our Organisation

A closer observation of Table 7.1 also suggested that socio-economic sustainability issues were not being considered as a priority, hence, being seen as posing a significant barrier for practitioners' organisations. Of the 21 practitioners who participated in the semi-structured interviews, 8 (38.1%) of them were of the view that, 'socio-economic sustainability not a priority for our organisation' was a very significant/significant barrier, while the remaining 13 (61.9%) of the 21 practitioners were also of the opinion that it was some/limited significant barrier to their quests to adopt and implement social and economic sustainability in their

regeneration projects. Practitioners clearly indicated during the interview discussions that adopting the socio-economic sustainability factors was not the priority for their organisations, as they considered them as being a major barrier towards delivering other priorities for their projects. One practitioner for example, frankly stated his view by saying:

…In terms of meeting other things for the projects, I will say, adopting the social and economic sustainability issues cause a significant barrier for us. …Although we try to deliver them, but frankly speaking, they are not our main priority. …For us as a company, our main priority first and foremost is towards our projects and everything else comes as secondary…

Further to the above semi-structured interview results, the present study also obtained data from 193 practitioners through a questionnaire survey, in an attempt to validate the interview results. The results obtained in Table 7.2 show that more than 66% of practitioners have cited 'socio-economic sustainability not a priority for our organisation' as being a very significant/significant barrier, compared to 26.8% of them who have also cited it as some/limited significant barrier for their organisations. However, 6.9% of them were of the opinion that it was not a significant barrier at all, which was hindering their organisations in prioritising the adoption and implementation of the socio-economic sustainability factors in their regeneration projects. Largely, the findings also are in agreement with the earlier study conducted by Upstream (2005), which claimed that, the social and economic sustainability factors were often the least prioritised aspects of practitioners' organisations' sustainability strategies. From the above results, based on practitioners 'very significant/significant' responses, it is obvious that the questionnaire survey results (66.3%) did not validate the semi-structured interviews results (38.1%). The difference in agreement could possibly be due to the size of population from which both data was obtained and analyses subsequently conducted.

This finding is surprising, as practitioners ought to be aware of the main sustainability composition of sustainable regeneration projects. On the whole, the finding demonstrates the lack of understanding (as noted in the previous sections) of the priorities and key sustainability composition of sustainable regeneration projects by practitioners. Although the finding seems disappointing, it is however encouraging to observe that at least some practitioners (6.9%) are not construing socio-economic sustainability factors as a significant barrier and hence, are given priority to them by their organisations. From the finding, it can be

deduced that practitioners are interpreting the perceived socio-economic sustainability barrier differently, and this is making some of them to prioritise other things considered to be of less risk to their organisations. Again, it could also be due to the fact that practitioners seem to find it easier to deliver the environmental aspects compared to the socio-economic sustainability aspects of their regeneration projects. This also suggests that practitioners are still skeptical about adopting and implementing factors that relate to the socio-economic sustainability of their regeneration projects. This can potentially lead to practitioners adopting a piecemeal approach, resulting in their regeneration project's inability to achieve their socio-economic sustainability objectives. This further suggests the need to educate practitioners about the key sustainability contents of sustainable regeneration projects. Doing so will largely help to avert the scepticism associated with the adoption and implementation of the socio-economic sustainability factors. Moreover, it is crucial that policy makers, together with other sustainable regeneration regulatory agencies, produce a guideline or checklist of the key sustainability composition of sustainable regeneration projects, to guide practitioners. Similarly, incentives and reward schemes could also be introduced, to encourage practitioners to prioritise adopting and implementing more socio-economic sustainability deliverables in their regeneration projects.

To ascertain if there was any significant correlation between the top three barriers considered (ranked) by practitioners, a Spearman's correlation test was further undertaken. Similarly, these top three barriers were selected due to the prominence given to them by practitioners in both the questionnaire survey and the interviews. It should be reiterated that the data employed for the top three barriers (samples) were independently and randomly selected and measured on the same Likert scale. At a significant level of $p < .01$, the output (Table 7.3) obtained shows statistical significance values for all the top three socio-economic sustainability drivers as 0.000. The results further indicates a positive correlation between; 'lack of funding/financial support/grant' and 'unfavourable contract requirements/conditions' (rho = $.414^{**}$, p = .000, two-tailed); 'lack of funding/financial support/grant' and 'lack of client willingness to adopt sustainability' (rho = $.593^{**}$, p = .000, two-tailed); and 'unfavourable contract requirements/conditions' and 'lack of client willingness to adopt sustainability' (rho = $.521^{**}$, p = .000, two-tailed). The results of the test suggest that there was unanimous agreement among practitioners about the impact of these top three barriers on their ability to adopt and implement the socio-economic sustainability factors on their regeneration projects. This suggests that practitioners who considered the 'lack of

funding/financial support' as very significant/significant barrier also considered 'unfavourable contract requirements/conditions' and 'lack of client willingness to adopt sustainability' as very significant/significant barriers. The results further imply that these three barriers are interrelated, in that the impact of anyone of them has implications for the others. Similarly, with the Partial Eta Square values (0.155, 0.188 and 0.230) (Appendix E) obtained in relation to the aforementioned barriers, when "using the commonly used guidelines proposed by Cohen (1988: 284-7)", where 0.01 indicate small effect, 0.06 moderate effect, and 0.14 large effect, then it can be suggested that their effect sizes are large (Pallant, 2010: 263). This further reinforced the impact these barriers are likely to have on the successful delivery of successful regeneration projects. Hence, any attempt to address one of these barriers must also address the other two barriers concurrently.

Table 7.3: Spearman's correlation test of the top three considered barriers

Correlations					
			Lack of funding/ financial support/grant	Unfavourable contract requirements /conditions	Lack of client willingness to adopt sustainability
Spearman's rho	Lack of funding/ financial support/grant	Correlation Coefficient	1.000	.414**	.593**
		Sig. (2-tailed)	.	.000	.000
		N	193	193	193
	Unfavourable contract requirements/conditions	Correlation Coefficient	.414**	1.000	.521**
		Sig. (2-tailed)	.000	.	.000
		N	193	193	193
	Lack of client willingness to adopt sustainability	Correlation Coefficient	.593**	.521**	1.000
		Sig. (2-tailed)	.000	.000	.000
		N	193	193	193
**. Correlation is significant at the 0.01 level (2-tailed).					

7.9 Summary

The Chapter presented the data analysis and discussion on the seven (7) barriers identified to be impeding practitioners to adopt and implement the socio-economic sustainability factors in their regeneration projects and notably documented the following findings and recommendations.

It was observed that all the 21 practitioners who participated in the semi-structured phase of the study were finding the lack of financial/ funding support as a very significant/significant barrier for them to adopt and implement socio-economic sustainability factors in their regeneration projects. It was further observed that 85.2% of the 193 practitioners who participated in the questionnaire survey phase of the study were also very significantly/significantly impeded by 'lack of funding/financial support', compared to 12.8% of them who were finding it as some/limited significant barrier to their socio-economic sustainability practices. 2% of practitioners on the other hand, were of the view that 'lack of funding/financial support' was not a significant barrier at all for them to adopt and implement the socio-economic sustainability factors in their regeneration projects. What became apparent was that, although lack of financial/funding support has been a major barrier over the years, the economic crisis has exacerbated the situation in present times. Similarly, the dissolution of regeneration delivery partnership schemes such as the New Deal for Communities (NDC) and the Neighbourhood Renewal Fund (NRF) etc., which were the main vehicles that the UK government was using to provide financial/funding support for practitioners, was also found to have contributed to this phenomenon. In view of this, the author further suggested the need for the UK government and other regeneration organisations to explore other funding methods and sources beyond the conventional funding sources, to help provide support for practitioners to deliver the socio-economic aspects of sustainable regeneration projects.

The Chapter also revealed that 19 (90.5%) of the 21 practitioners who took part in the semi-structured interviews were of the view that 'unfavourable contract requirements/conditions' was a very significant/significant barrier, while the remaining 2 (9.5%) of the 21 practitioners were also of the opinion that it was some/limited significant barrier for them to adopt and implement the social and economic sustainability factors in their regeneration projects. Also, 82.1% of practitioners who participated in the questionnaire survey phase of the study were of the opinion that 'unfavourable contract requirements/conditions' was a very significant/significant barrier, compared to 15.9% who indicated that it was some/limited significant barrier for them. The results further revealed that 2.1% of practitioners were not finding 'unfavourable contract requirements/conditions' as a significant barrier at all. Based on the findings, it was concluded that the majority of current regeneration practitioners in the UK were finding contracts requirements as a very significant or significant barrier for them to adopt and implement socio-economic sustainability in their regeneration projects. It was also suggested that this barrier if not addressed, could potentially impact on the number, nature

and quality of employment and skill training opportunities provided by practitioners on their regeneration projects.

The Chapter also revealed that 18 (85.7%) of 21 practitioners who were interviewed were finding the 'lack of client willingness to adopt sustainability' as a very significant/significant barrier. While the remaining 3 (14.3%) of the 21 practitioners were also finding it as some/limited significant barrier for them to adopt and implement socio-economic sustainability factors in their regeneration projects. Similarly, 79.6% of the 193 practitioners who took part in the questionnaire survey phase of the study, were finding the 'lack of client willingness to adopt sustainability' as a very significantly/significantly barrier, compared to 18.0% who were finding it as some/limited significant barrier to adopt and implement socio-economic sustainability in their regeneration projects. One deduction that was made from this finding was that clients were still aligning the success of their projects to the time, cost and quality deliverables, in that sustainability issues were only being considered as by-products or add-on activities of their regeneration projects. The author was of the view that enhancing clients' awareness and knowledge of the sustainability composition of sustainable regeneration projects could help them to get a better understanding, and change their mind-set and attitudes towards the adoption and implementation of the socio-economic sustainability factors for their regeneration projects. It was further suggested that practitioners, policy makers and academia could be instrumental in helping to create the awareness to enable clients to appreciate the main sustainability composition of sustainable regeneration projects.

Furthermore, 15 (71.4%) of the 21 practitioners who participated in the semi-structured interviews believed that the perceived cost of sustainability was a very significant/significant barrier, while the remaining 6 (28.6%) of the 21 practitioners also held the view that it was some/limited significant barrier to their quests to adopt and implement social and economic sustainability factors in their regeneration projects. Similarly, 73.6% of practitioners who took part in the questionnaire survey were of the view that the 'perception that sustainability is costly' was a very significant/significant barrier, compared to 23.7% who also indicated that it was some/limited significant barrier to their socio-economic sustainability practices on the projects. However, 2.7% of them were of the view that the cost perception of sustainability was not a significant barrier at all for them to adopting and implementing the socio-economic sustainability features in their regeneration projects. The complex nature and uncertainty surrounding sustainability, coupled with the profit-oriented approach often adopted by

practitioners, were said to have played a significant role in their perceptions. However, it was suggested that the cost perception could be overcome if practitioners took a long-term and holistic view of the overall benefits of delivering sustainability, and not just looking at the short-term commercial risk usually associated with the initial cost of delivering the projects.

From the Chapter, it was also observed that 13 (61.9%) of the 21 practitioners who were interviewed, were of the view that adopting and implementing the social and economic sustainability factors was a very significant/significant barrier, which was conflicting with their organisations' business objectives. A further 8 (38.1%) of them were also of the opinion that adopting socio-economic sustainability issues was posing some/limited significant barrier on their organisations' business objectives. Also, 65.9% of the 193 practitioners who participated in the questionnaire survey ranked, 'conflicts with our organisation business objectives' as a very significant/significant barrier, compared to 30.0% of them who also ranked it as some/limited significant barrier to their socio-economic sustainability practices. However, 4.1% of practitioners ranked 'conflicts with our organisation business objectives' as not being a significant barrier at all for their organisations to adopt and implement socio-economic sustainability practices. It was suggested that educating practitioners could help them to overcome the conflict. The author was of the view that the academia and the professional and regulatory bodies could help to provide sustainability training and programmes that would enable practitioners to acquire the levels of sustainability knowledge and skills that will equip them to deal with such conflict issues.

It was also noticed that of the 21 practitioners who were interviewed, 12 (57.1%) have cited 'conflict with stakeholder interest' as a very significant/significant barrier which was impeding them, while the remaining 9 (42.9%) of the 21 practitioners have also cited it as some/limited significant barrier which was impeding them to adopt and implement social and economic sustainability factors in their regeneration projects. It was further noticed that 47.7% of the 193 practitioners who took part in the questionnaire survey phase of the study, were very significantly/significantly hindered by 'conflict with stakeholder interest', compared to 45.6% of practitioners who have indicated that it was some/limited significant barrier to adopt and implement social and economic sustainability in their regeneration projects. Furthermore, 6.7% of them also indicated that 'conflict with stakeholder interest' was not a significant barrier at all for them to adopt and implement social and economic sustainability factors in their regeneration projects. It was suggested that developing a

comprehensive sustainability strategy and approach that enabled effective identification, engagement and understanding of various stakeholders' sustainability interests and needs, could help practitioners to effectively address the conflict.

The Chapter also revealed that 8 (38.1%) of the 21 practitioners who were interviewed were of the view that 'socio-economic sustainability not a priority for our organisation' was a very significant/significant barrier, while the remaining 13 (61.9%) of the 21 practitioners were also of the opinion that it was some/limited significant barrier to their quests to adopt and implement social and economic sustainability in their regeneration projects. Equally, of the 193 practitioners who participated in the questionnaire survey, 66% of practitioners have cited 'socio-economic sustainability not a priority for our organisation' as being a very significant/significant barrier, compared to 26.8% of them who have also cited it as some/limited significant barrier for their organisations. However, 6.9% of them indicated that it was not a significant barrier at all for their organisations to adopt and implement the socio-economic sustainability factors in their regeneration projects. A notable deduction made from this finding was that practitioners were putting different interpretations on how they perceived the socio-economic sustainability barriers, and this was making some of them prioritise other things considered to be of less risk to their organisations. On the whole, the lack of knowledge and understanding of the priorities of the key sustainability composition of sustainable regeneration projects by practitioners was found to have played a major role in this finding. In view of this, it was suggested that policy makers together with other sustainable regeneration regulatory agencies, produce a guideline or checklist of the key sustainability composition of sustainable regeneration projects to guide practitioners. It was further suggested that the introduction of incentives and reward schemes could potentially help encourage practitioners to give adequate priority to the socio-economic sustainability factors of their generation projects.

Finally, the correlation test conducted on the top three most considered barriers, showed a positive significant correlation between the; 'lack of funding/financial support/grant', 'unfavourable contract requirements/conditions' and 'lack of client willingness to adopt sustainability'. The results of the test suggested that there was unanimous agreement among practitioners about the impact of these top three barriers on their ability to adopt and implement the socio-economic sustainability factors in their regeneration projects. The results further implied that these three barriers were interrelated, in that the impact of anyone of them

had implications on the others. Hence, it was suggested that any attempt to address any one of these barriers must also consider addressing the other two barriers alongside it. The next Chapter presents the data analysis and discussion on the UK government's socio-economic sustainability policy drivers of sustainable regeneration projects.

CHAPTER 8 THE UK GOVERNMENT'S INFLUENTIAL SOCIO-ECONOMIC REGENERATION POLICY DRIVERS

8.1 Introduction

This Chapter presents the data analysis and discussion on the eleven UK government's socio-economic sustainability (six social and five economic) policy drivers for sustainable regeneration projects. The Chapter also addresses objective six of the study. The data employed to present the analysis and discussion of the Chapter is obtained through semi-structured interviews from 21 practitioners and a questionnaire survey from 193 practitioners from the sustainable regeneration practitioners in the UK. The questionnaire survey data analysis is used to validate or corroborate the semi-structured interview data analysis. The Chapter begins with a brief outline of the background literature and goes on to present the preliminary results of the six social sustainability policy drivers, followed by the five economic sustainability policy drivers respectively. Detailed analysis, discussion and findings are further presented, first for the social sustainability policy drivers, followed by the economic sustainability policy drivers, based on the highest number of responses received for the policy drivers, as shown in Table 8.1 and Table 8.2. It finally presents the summary, outlining the main findings and recommendations for the Chapter.

The UK's sustainable regeneration policy initiatives have traditionally been designated and defined by area-based initiatives, to promote steady progress towards a future of universally shared social and economic prosperity of communities (CLG, 2008; Dixon, 2006). These policies set out the visions, priorities and the guiding principles for what was to be achieved in terms of sustainability, covering the period up to the year 2020, and provided a practical approach to dealing with the issues of sustainable development and regeneration (SDC, 2008). Apparently, such policy initiatives have formed the cornerstone on which many built environment practitioners have produced their sustainability policies to drive sustainability issues within their organisations.

However, to date, it is argued that the main rationale behind the formulation of such socio-economic regeneration policy initiatives still remains contested, and in some cases, unclear in many practitioners' policy systems (Raco and Henderson, 2009). The call for greater socio-economic performance of regeneration continues to gather momentum, and the need to keep pace with the sustainable development agenda makes a more plausible and urgent case for

practitioners to promote sustainability policies and practices that enable their regeneration projects to achieve these core objectives.

Another fundamental reason why the promotion of the government's policy drivers is important is that they can help to provide the means by which practitioners can demonstrate their contributions towards the achievement of the national sustainable regeneration policy agenda. Government's policy drivers also enable the necessary conditions to be provided in which the benefits of social and economic prosperity can be 'spread to a broader range of population groups' (Raco and Henderson, 2009: 302). Hence, in view of this, it can be argued that the need to explore the influence of the government's sustainability policy drivers on practitioners' policies and practices towards the delivery of the socio-economic benefits of regeneration projects is highly unquestionable.

The main objective of this Chapter is to explore the UK government's socio-economic regeneration policy drivers which influence practitioners' policies and practices to promote social and economic sustainability factors in the regeneration projects. To achieve this objective, the study first obtained data from 21 practitioners through semi-structured interviews. This was further complemented by a questionnaire survey study which also obtained data from 193 regeneration practitioners within the UK construction industry. It is worth noting that the words; 'policy driver(s)' and 'UK government policy driver(s)' are used in this Chapter to mean same thing, and hence, are used interchangeably.

From the preliminary analysis of the semi-structured interviews, it was observed that there were primarily two categories of responses from practitioners. The results in Table 8.1 showed that 19 (90.48%) of the 21 practitioners who were interviewed, were of the view that 'to promote health and safety of the work force and local community/residents' was a very influential/influential policy driver, while the remaining 2 (9.52%) of the 21 practitioners also indicated that they were fairly/slightly influenced by it. Furthermore, 18 (85.71%) of the 21 practitioners were very influenced/influenced by 'to promote affordable housing' policy driver, while 3 (14.29%) of the practitioners were also fairly/slightly influenced by it. The results also revealed that 'to promote education and skill training' was very influential/influential for 15 (71.43%) of the 21 practitioners, while the remaining 6 (28.57%) of the 21 practitioners were also fairly/slightly influenced by the aforementioned policy driver. Similarly, 14 (66.67%) of the 21 practitioners have indicated that 'to promote

security/wellbeing' policy driver was very influential/influential, while the remaining 7 (33.33%) of the 21 practitioners have also stated that they were fairly/slightly influenced by it. The interview results further suggested that 'to promote the physical outlook of the area' was a very influential/influential policy driver for 13 (62.00%) of the 21 practitioners, while the remaining 8 (38.00%) of the 21 practitioners were also fairly/slightly influenced by it. The results also discovered that 'to promote stakeholders participation' was a very influential/influential policy driver for 11 (52.38%) practitioners, while the remaining 10 (47.62%) of the 21 practitioners have indicated that they were fairly/slightly influenced by the aforementioned policy driver.

Table 8.1 further revealed that 'to promote profit for developer and funders/return on investment (ROI)' was a very influential/influential policy driver for 20 (95.24%) of the 21 practitioners, while only 1 (4.76%) practitioner was found to have been fairly/slightly influenced by the aforementioned policy driver. Similarly, 20 (95.24%) of the 21 practitioners indicated that 'to promote jobs and employment opportunities' was a very influential/influential policy driver. Again, only 1 (4.76%) of the 21 practitioners was of the view that it was a fairly/slightly influential policy driver for them to promote the economic sustainability policies and practices. Also, 'to promote value for money' received very influential/influential responses from 18 (85.71%) of the 21 practitioners, likewise the remaining 3 (14.29%) of the 21 practitioners also stated that it was a fairly/slightly influential policy driver for them. The results further discovered that 16 (76.19%) of the 21 practitioners were of the opinion that 'to promote investment in local businesses and enterprises' was a very influential/influential policy driver, while 5 (23.81%) of the 21 practitioners on the other hand, were also fairly/slightly influenced by it. Finally, of the 21 practitioners, 15 (71.43%) have indicated that 'to promote local/area economic growth' was a very influential/influential policy driver, while the remaining 6 (28.57%) of the 21 practitioners were of the view that the aforementioned policy driver was fairly/slightly influential for them to promote the economic sustainability policies and practices.

Table 8.1: Semi-structured interviews results of the UK government's sustainable regeneration (social and economic) policy drivers

Influential UK government's sustainable regeneration policy drivers	Practitioners Total N = 21	
	Very Influential/ Influential	Fairly/Slightly Influential
To promote health and safety of work force and local community /residents (S) (PHSFLC)	19 (90.48%)	2 (9.52%)
To promote affordable housing (S) (PAH)	18 (85.71%)	3 (14.29%)
To promote education and skill training opportunities (S) (PESTO)	15 (71.43%)	6 (28.57%)
To promote security/wellbeing (S) (PSWA)	14 (66.67%)	7 (33.33%)
To promote the physical outlook of the area (S) (PPOA)	13 (62.00%)	8 (38.00%)
To promote stakeholders participation (S) (PSP)	11 (52.38%)	10 (47.62%)
To promote profit for developer and funders/return on investment (E) (PPD/ROI)	20 (95.24%)	1 (4.76%)
To promote jobs and employment opportunities (E) (PJEO)	20 (95.24%)	1 (4.76%)
To promote value for money (E) (PVM)	18 (85.71%)	3 (14.29%)
To promote investment in local businesses and enterprises (E) (PIBE)	16 (76.19%)	5 (23.81%)
To promote local/area economic growth (E) (PLAEG)	15 (71.43%)	6 (28.57%)

Note: (S): social sustainability factor; (E): economic sustainability factor

In terms of the questionnaire survey, the preliminary results obtained (Table 8.2) revealed that, of the 193 practitioners, 84.60% of them were very influenced/influenced by 'to promote health and safety of workforce and local community/residents' policy driver, compared to 14.90% who were also fairly/slightly influenced by the aforementioned policy driver. The results also discovered that 'to promote affordable housing' was a very influential/influential policy driver for 85% of the 193 practitioners, compared to 14.60% of them who indicated that they were fairly/slightly influenced by it. The results further revealed that 63.80% of the practitioners were very influenced/influenced by 'to promote education and skill training' policy driver, compared to 34.20% of them who were also fairly/slightly influenced by it. Similarly, 'to promote security/wellbeing' was a very influential/influential policy driver for 76.20% of the 193 practitioners, compared to 22.80% of them who were fairly/slightly influenced by it. Furthermore, 68.40% of them were very influenced/influenced by 'to promote the physical outlook of the area' policy driver, compared to 30.60% of them who found it to be fairly/slightly influential policy driver. The results further showed that 'to promote stakeholders participation' was a very influential/influential policy driver for 57.60% of the 193 practitioners, while 39.80% of them were also fairly/slightly influenced by the aforementioned policy driver.

The questionnaire survey results (Table 8.2) further revealed that 'to promote profit for developer/funders' was a very influential/influential policy driver for 88.40% of the 193

practitioners, compared to 10.60% of them who were fairly/slightly influenced it. The results also discovered that 73.10% of the 193 practitioners were very influenced/influenced by 'to promote jobs and employment opportunities', compared to 25.90% of them who were fairly/slightly influenced by the aforementioned policy driver. Similarly, 'to promote value for money' was a very influential/influential policy driver for 78.90% of the 193 practitioners, compared to 20.10% of them who indicated that it was a fairly/slightly influential policy driver. Also, 74.90% of them were of the opinion that 'to promote investment in local businesses/enterprises' was a very influential/influential policy driver likewise it was also fairly/slightly influential for 22.80% of the 193 practitioners. Finally, 76.70% of the practitioners were of the opinion that 'to promote local/area economic growth' was a very influential/influential policy driver, compared to 20.20% of them who were of the view that they were fairly/slightly influenced by it to promote economic sustainability in their policies and practices.

Table 8.2: Questionnaire survey results of the UK government's sustainable regeneration (social and economic) policy drivers

Influential UK government's policy drivers (percentage)	N	Very Influential	Influential	Fairly Influential	Slightly Influential	Not Influential
To promote health and safety of work force and local community /residents (S) (PHSFLC)	193	35.4%	49.2%	10.7%	4.2%	0.5%
To promote affordable housing (S) (PAH)	193	39.9%	45.1%	13.0%	1.6%	0.5%
To promote education and skill training opportunities (S) (PESTO)	193	24.9%	38.9%	25.9%	8.3%	2.1%
To promote security/wellbeing (S) (PSWA)	193	25.4%	50.8%	17.6%	5.2%	1.0%
To promote the physical outlook of the area (S) (PPOA)	193	20.2%	48.2%	23.3%	7.3%	1.0%
To promote stakeholders participation (S) (PSP)	193	21.7%	35.9%	30.5%	9.3%	2.6%
To promote profit for developer and funders/return on investment (E) (PPD/ROI)	193	37.1%	51.3%	8.5%	2.1%	1.0%
To promote jobs and employment opportunities (E) (PJEO)	193	25.9%	47.2%	22.8%	3.1%	1.0%
To promote value for money (E) (PVM)	193	32.8%	46.1%	12.3%	7.8%	1.0%
To promote investment in local enterprises and businesses (E) (PIBE)	193	31.4%	43.5%	16.6%	6.2%	2.3%
To promote local/area economic growth (E) (PLAEG)	193	39.9%	36.8%	13.5%	6.7%	3.1%

8.2 To Promote Health and Safety of Workforce and Local Community/Residents

Ensuring a healthy society and safe working environment have been acknowledged as one major means by which social sustainability goals of society can be met (Hofstad, 2012; Colantonio, 2008). A detailed analysis of the semi-structured interview results (Table 8.1) clearly reveals that practitioner's social sustainability policies and practices were being influenced by the health and safety policy drivers of the government. Of the 21 practitioners who participated in the interviews, 19 (90.48%) of them were of the view that to promote health and safety of their workforce and local community/residents was a very influential/influential social sustainability policy driver, while 2 (9.52%) of the 21 practitioners were of the opinion that their policies and practices were fairly/slightly influenced by the aforementioned policy driver. A pre-requirement for attaining the social regeneration objectives is the maintenance of the social sustainability policy that ensures adequate promotion and adherence to health and safety measures. Sustainability policy initiatives emanating from governments and other regulatory bodies can influence how practitioners respond to sustainability issues on their projects, particularly in terms of dealing with issues relating to health and safety. This view was made clear by one practitioner during the interview by saying:

…Our health and safety policies are in line with what the government wants us to achieve in terms of ensuring adequate health and safety of our people and the community we operate in. To a large extent, I will say, they have a lot of influence on the way we approach the health and safety issues on our projects. …What we have been doing is to evaluate our health and safety performance against those government policy measures and targets.

Health and safety can have a significant social sustainability impact towards the delivery of sustainable regeneration projects, and therefore is required to be considered as an integral part of any sustainable regeneration policy initiative and practice (Upstream, 2005). Further to the above interview results, the questionnaire survey results (Table 8.2) obtained from 193 practitioners reveal that 84.60% of them were very influenced/influenced by 'to promote health and safety of workforce and local community/residents' policy driver, compared to 14.90% of them who were fairly/slightly influenced by the aforementioned policy driver. Comparing the two results in terms of their 'very influential/influential' responses, it can be suggested that the questionnaire survey result (84.60%) has validated the (90.48%) result obtained from the semi-structured interviews. Interestingly, it can be observed that this

finding agrees with the finding obtained in Chapter 6. Similarly, the finding also reinforces the works of Akadiri *et al.* (2012); Nwokoro and Onukwube (2011); Colantonio (2008); and EPH (2008), in which they have identified health and safety issues among the emerging social sustainability issues considered by many practitioners. The finding of the present study is encouraging and gives an indication of good awareness and understanding of the government's health and safety policies by the majority of regeneration practitioners in the UK. It also implies that the majority of the UK's regeneration practitioners are adhering to the government's health and safety policy initiatives and guidelines. The finding of the present study is also an indication that practitioners are becoming aware of the opportunities and other consequences of pursuing good health and safety policies and practices on their regeneration projects, hence, aligning their health and safety policies and practices to the government's health and safety policy initiatives and guidelines. Nonetheless, there is still room for improvement, since issues relating to the health and safety of society are of utmost importance to the social sustainability aspects of sustainable regeneration.

As indicated in Chapter 6, the outcome of this present study could also be due to the UK government's policies and regulations which sought to impose heavy sanctions and in some cases, blacklist practitioners who are found to be engaged in poor health and safety practices. According Upstream (2005), around a third of all prosecutions which were taken forward by the Health and Safety Executive (HSE) were against construction companies. Hence in view of this, it obvious that the majority of practitioners are taking adequate steps in putting policies in place to ensure that they deliver their projects in line with the government's policy guidelines and regulations. Equally, good health and safety policies and practices can lead to an increase in productivity for practitioners' organisations. A study conducted by Upstream (2005) has found that the application of a good health and safety policy can result in substantial cost savings for practitioners' organisations. Upstream's (2005) findings further revealed that applying good health and safety policies and practices can result in reduction of insurance premiums for such organisations. For sustainable regeneration projects to achieve their desired social sustainability goals, it is important that such projects are delivered to meet their health and safety policy objectives. Hence, it can be argued that practitioners whose health and safety policies and practices are in line with the ones that are set out by the government would be more likely to deliver the health and safety social sustainability objective of their regeneration projects.

8.3 To Promote Affordable Housing

A further exploration of Table 8.1 indicates that practitioners were also influenced by the government's housing policy driver. The semi-structured interview results reveal that 18 (85.71%) of the 21 practitioners were very influenced/influenced by 'to promote affordable housing' policy driver, while the remaining 3 (14.29%) of the 21 practitioners' regeneration policies and practices were also fairly/slightly influenced by the aforementioned policy driver. The UK's government has outlined the need to increase the rate and provision of affordable houses to meet the target of three million new homes by 2025 (DBIS, 2013). It is argued that housing and regeneration policies are mutually reinforcing (Clapham, 2014; CLG, 2008). Traditionally, the UK regeneration policy initiatives have focused on the provision of housing (SERCS, 2011; Dixon, 2006), a view which was strongly shared by the majority of practitioners during the interview discussion. It is obvious that in recognising the importance the government has attached to housing-led regeneration, most practitioners are being influenced by this and hence, aligning their housing policies to the government's housing regeneration policy initiatives. To some of them, doing so puts them in an advantageous position, as demonstrated by one of them by saying:

…I think at the centre of sustainable regeneration policy is housing. The provision of affordable housing, in my view, has been the brain behind the UK's sustainable regeneration policy initiatives. We recognised the importance governments over the years have attached to housing. As regeneration practitioners, we recognise that and we take advantage of that. So we are very much influenced by the government's policies on housing regeneration. This view was also acknowledged by Maliene *et al.* (2008).

The subsequent results (Table 8.2) obtained from the 193 practitioners who participated in the questionnaire survey phase of the study, further reveal that 85% of them were very influenced/influenced by 'to promote affordable housing' policy driver, compared to 14.60% of them who indicated that they were fairly/slightly influenced by the aforementioned policy driver. Apparently, comparing both results in terms of their 'very influential/influential' responses, it can be observed that the questionnaire survey result (85%) strongly validates the semi-structured interview result (85.71%). This finding is not surprising and also goes to confirm the findings obtained in Chapters 4 and 6. The finding further gives a good indication that practitioners are aware of the government's housing policy driver and hence, are embedding it into their social regeneration policies and practices. Since housing has remained

a major policy initiative in which the UK government continues to promote housing regeneration, it stands to reason that most practitioners' organisations' regeneration policies and practices will be centred on housing. However, a possible implication of this finding is that the over concentration on housing-led regeneration policy can limit the promotion and provision of other types of regeneration projects, which can equally lead to the delivery of other social sustainability benefits for society.

The finding from the present study also corroborates the works of Dixon (2006) and Upstream (2005). Evidence that emerged from Upstream's (2005) study, for example, has shown that most practitioners involved in delivering sustainability projects in the UK were developing policies and strategies for sustainable housing projects for their construction organisations. Delivering sustainable housing is a crucial aspect of the UK government's community regeneration objective which most practitioners' social sustainability policies and practices are attempting to achieve. This position is largely supported by the finding of this present study. While this finding can be seen to be encouraging, it is crucial that practitioners do not just focus their policies and practices on the provision of sustainable housing. It is equally important that they also consider the quality aspects of their services. It is suggested that focusing regeneration policies on the delivery of good quality houses has the potential to propel humanity towards the realisation of the local Agenda 21 objectives advocated by the United Nations Habitat Agenda (Winston, 2009). Similarly, it is believed that social sustainability policy initiatives that seek to deliver good quality and affordable houses will have wider impacts on other social sustainability factors such as security/wellbeing, as well as the physical environment/outlook (Smith, 2006). In this regard, it is important that the government's affordable housing policy initiatives are also designed to take the quality aspects into account. By doing so, the author believes, will have a profound influence on practitioners' affordable housing policies, which will enable them to promote and deliver other social sustainability benefits as also indicated by Winston (2009) and Smith (2006).

8.4 To Promote Education and Skills Training

The semi-structured interview results (Table 8.1) further reveal that 'to promote education and skill training' was very influential/influential for 15 (71.43%) of the 21 practitioners, while the remaining 6 (28.57%) of the 21 practitioners' policies and practices were also fairly/slightly influenced by the aforementioned policy driver. Providing education and skills training opportunities is one valuable means in which practitioners can also demonstrate their

contribution towards the promotion and delivery of the social sustainability benefits of their regeneration projects. A good number of practitioners who were interviewed acknowledged the importance of the UK government's policy initiatives on education and skills training. In responding to the question put to practitioners during the interview discussion, it was apparent that most of their policies and practices were influenced by them knowing what the government policies were in relation to this social sustainability policy driver. They were of the view that promoting education and skill training was of equal importance to them as practitioners, to help address the skills shortage within the construction industry, as one of them for example commented by saying:

...Yes our policies are pretty much influenced by what the government wants us to deliver in terms of education and skills training. As practitioners, we understand what government policies are in terms of providing education and training opportunities for our people and we factor that into our policies. In fact, knowing what the government plans are, helps us to deliver them, which also in a way helps to address the skills shortage in our industry as well…

The view expressed in relation to addressing the skills shortage within the construction industry concurs with those expressed by DBIS (2013) and Upstream (2005). The findings from Upstream (2005) study claimed that at least one in five organisations were experiencing skills shortages in that they were being forced to leave certain key jobs and positions unfilled. In view of this, the Review of Sustainable Construction Strategy for sustainable construction emphasised the need for a greater uptake of education and skills training programmes to bridge the skills and knowledge gap within the construction industry (CLG, 2007). In an attempt to validate the above semi-structured interview results, the results (Table 8.2) obtained from the 193 practitioners who participated in the questionnaire survey phase of the study, show that 63.80% of practitioners were very influenced/influenced by 'to promote education and skills training' policy driver, compared to 34.20% of them who were fairly/slightly influenced by the aforementioned policy driver. Comparing both the interview and questionnaire survey results in terms of their 'very influential/influential' results, it can be said that there is a significant level of agreement between the semi-structured interview result (71.43%) and the questionnaire survey result (63.80%). Following this finding, it can be suggested that a significant number of the current UK regeneration practitioners' education

and skills training policies and practices are being influenced by the UK government's policy driver on education and skills training.

It is refreshing to find that a good number of practitioners who participated in the present study are promoting education and skills training policies in line with the government policy initiatives. As stated in Chapters 5 and 6, this group of practitioners, stand a chance of building their organisations' reputations as 'best sustainability practice' organisations, which will potentially give them a competitive edge over their peers in the market place. It would also potentially put such organisations in a better position to recruit/retain good quality and skilled employees. Conversely, it can also be observed from the finding that a sizeable number of practitioners are still not being influenced by this policy driver. This could possibly be due to lack of awareness of how the promotion of this policy driver can help in shaping the future prospects of their organisations. The perceived cost of sustainability could also be assumed to be one of the reasons behind their inability to consider this policy driver. This finding also suggests that practitioners still have more to do to ensure that their organisations' policies and practices contribute to promoting education and skills training opportunities on their regeneration projects. However, the author is of the view that the introduction of legislations by the UK government, coupled with regulations from other construction industry regulatory bodies, would enable practitioners to adequately promote this policy driver in their regeneration policies and practices. It is believed that promoting this policy driver adequately would also potentially help to reduce unemployment rates within the communities, as it is argued that individuals with limited employability skills are more likely to suffer from barriers to mobility, poverty and unemployment (Clapham, 2014; HM Treasury, 2007).

8.5 To Promote Security/Wellbeing

Another major requirement for attaining the social regeneration objective is about the security/wellbeing of society. The UK government's sustainable development and regeneration policies have long recognised the important role security/wellbeing plays towards the attainment of the sustainable regeneration objectives of society. A detailed analysis of the semi-structured interview results (Table 8.1) reveal that 14 (66.67%) of the 21 practitioners were very influenced/influenced by, 'to promote security/wellbeing' policy driver, while the remaining 7 (33.33%) of the 21 practitioners' regeneration policies and practices were also fairly/slightly influenced by the aforementioned policy driver. Expressing their views during the interview, some practitioners indicated that considering the fact that

they have to work in partnership with the government to deliver regeneration projects, it was very important for them to look at security/wellbeing issues in line with the government's security/wellbeing policy initiatives. As one practitioner for example indicated by saying:

…Security and wellbeing issues concern us just as they concern the government, because we work together as partners to deliver regeneration projects. …We do not deliver these things in isolation. We work in partnership with the government. So obviously, policy wise, the government policy does have a lot of influence on the way we look at security and wellbeing issues.

The study further gathered data through a questionnaire survey in an attempt to validate the semi-structured interview results obtained above. Of the 193 practitioners who participated in the survey phase of the study, the results (Table 8.2) show that 76.20% of them were very influenced/influenced by 'to promote security/wellbeing' policy driver, compared to 22.80% of them who were fairly/slightly influenced by the aforementioned policy driver. A closer examination of both 'very influential/influential' results, indicates some level of agreement between the questionnaire survey result (76.20%) and the semi-structured interview result (66.67%). The finding also provides an indication that the majority of practitioners are promoting security/wellbeing issues in their regeneration policies and practices. Although this finding seems encouraging, it should be stated that more work needs to done to educate practitioners who are still not giving consideration to this policy driver. The author is of the view that the introduction of legislation could help to ensure that all practitioners promote this policy driver in their policies and practices. It is believed that practitioners who are seen to be promoting their customers' security/wellbeing will stand a better chance of winning their support. On the whole, the finding lends support to the works of Winston (2009); Colantonio (2008); CLG (2008); Littig and Griebler (2005) and several other authors. Littig and Griebler's (2005) work, for example, identified social issues relating to security and wellbeing among the first order group of social sustainability factors. The work of Clapham, 2014, the Brundtland Report (1987) and the successive United Nations reports all indicated the need to give priority to security and wellbeing issues as a means of meeting communities' social sustainability needs. A study by Gibson *et al.* (2011) found that various aspects of activities carried out by the built environment practitioners can impact on individuals' security and wellbeing in general. For instance, the design and layout of sustainable regeneration projects can directly or indirectly influence the security and wellbeing of the communities where the

projects are located (Pitt *et al.*, 2009). In a study cited in Upstream (2005), it was found that sustainability projects which were designed based on the principles of secured by design, were experiencing between 54% and 67% less crime than the 'normal' building projects.

From a sustainable regeneration perspective, security/wellbeing issues are part of the guiding principles of the UK government's policy initiatives and strategy (SDC, 2003). This principle also forms the bedrock of its sustainable development objectives. Therefore, for sustainable regeneration projects to be socially sustainable, it is crucial that they are delivered in such a way that enables them to achieve this guiding principle. Accordingly, this calls for the promotion and application of policies and practices that enable practitioners to deliver the projects consistent with the government's policy initiatives and strategy that are underlying this policy driver.

8.6 To Promote the Physical Outlook of the Area

An observation of the semi-structured interview results in Table 8.1 also discovers that, of the 21 practitioners who took part in the interviews, 13 (62%) of them were very influenced/influenced by 'to promote the physical outlook of the area' policy driver, compared to 8 (38%) of them who were fairly/slightly influenced by the aforementioned policy driver. In ascertaining how this government policy driver was influencing them to promote the physical outlook of an area, some practitioners indicated that their policies and practices were principally guided by the government's policy initiative and programmes. They were of the view that doing so was a way of helping the government to achieve its policy objective of enhancing the physical areas with sustainable regeneration projects. Typically, one practitioner, for example, indicated this by saying:

…Governments' policies do influence our regeneration practices in this area. As practitioners, we take a lot of inspiration from the government policies and we are always guided by that. Governments' policies and efforts to enhance the physical areas with regeneration projects are quite clear to us as practitioners and we do our bit to let them achieve that objective. …What the government intend to achieve from a particular regeneration initiative is of interest to us…

As a follow up to validate the semi-structured interview results obtained from the 21 practitioners, the study also obtained data through a questionnaire survey from 193

practitioners. Of the 193 practitioners, the results (Table 8.2) reveal that 68.40% of them were of the view that 'to promote the physical outlook of the area' was a very influential/influential policy driver, compared to 30.60% of them who were of the opinion that the aforementioned policy driver was fairly/slightly influential for them. A closer observation of the 'very influential/influential' results suggest a significant level of agreement between the questionnaire survey result (68.40%) and the semi-structured interview result (62%). The finding is not surprising because the physical aspect of any regeneration development is seen to be more visible and tangible than other social sustainability factors. For this reason, most practitioners are more likely to promote this policy driver in their policies and practices than the other intangible social sustainability factors. This position is also supported by CLG (2008) report. It is argued that because physical regeneration is the visible form of regeneration activity, its impact is easily recognisable and felt by people. One such visible activity is making the areas 'more attractive locations for people to live and business to operate in' (CLG, 2008: 101). This view is also shared by Tyler (2011). This finding also gives an indication that improving the physical outlook with regeneration projects has received a more notable role in urban and community planning, both at the local and national levels, thereby making practitioners to promote it in their policies and practices. However, the author is of the opinion that over emphasising on enhancing the physical outlook of an area could lead to the neglect of other equally important social sustainability factors considered to be invisible in regeneration projects. While one of the objectives of sustainable regeneration involves the transformation of the physical outlook of the area, it is equally crucially important that the specific practices and policies adopted must deliver this objective alongside other social sustainability factors appropriate to the needs of the people, as well as the 'character of the area' (Evans *et al.*, 2009: 686).

8.7 To Promote Stakeholders Participation

The UK government's sustainable regeneration policies have over the years, been espousing the concept of stakeholder participation, and more recently have been emphasising community participation (Bailey, 2010; CLG, 2008). In Table 8.1, the semi-structured interview results reveal that 'to promote stakeholders participation' was a very influential/influential policy driver for 11 (52.38%) of the 21 practitioners, while the remaining 10 (47.62%) of the 21 practitioners' were also fairly/slightly influenced by the aforementioned policy driver. Interestingly, all the practitioners who took part in the interview discussions unanimously acknowledged the role of government as a major stakeholder in the

delivery of sustainable regeneration in the UK. They also acknowledged the importance of promoting this policy driver as one of the social sustainability factors on sustainable regeneration projects. Yet, a further analysis of the interviews discovered that some of them were only paying lip-service to it in their policies and practices. However, the majority of them held the view that because they were also part of the larger stakeholder group, it was virtually impossible for them to deliver regeneration projects without addressing this policy driver adequately in their policies and practices, as one practitioner typically indicated by saying:

The government is the major stakeholder when it comes to regeneration development in the UK, and we cannot deliver regeneration projects without taking government's policies and views into consideration. …of course we are also part of that larger stakeholder group and we help to make that happen. …Our regeneration policies are very much influenced by government's policy on this … and our practices do take this into account on our projects…

From (Table 8.2) the questionnaire survey results obtained to corroborate the semi-structured interview results, it is discovered that 57.60% of the 193 practitioners were very influenced/influenced by 'to promote stakeholders' participation' policy driver, compared to 39.80% of them who were fairly/slightly influenced by the aforementioned policy driver. Comparing both results in terms of their 'very influential/influential' results, it can be said that the questionnaire survey result (57.60%) has corroborated the semi-structured interview result (52.38%). While, the majority of practitioners appear to be promoting stakeholder participation, nearly half of them can be seen to be paying lip-service to promoting it in their policies and practices, as revealed by the 'fairly/slightly influential' results. The finding of the present study also reinforces the earlier study carried out by Upstream (2005), in which it was discovered that, whereas the majority of practitioners were promoting stakeholder participation on the sustainability projects, only a few were doing so in an active and holistic manner. However, there are notable implications for practitioners whose policies and practices may not be actively promoting stakeholder participation on their projects. This may include; disaffection, apathy, lack of support and even disputes from some of the key stakeholders. Equally, there is goodwill towards practitioners who are seen to be adequately promoting this policy driver in their policies and practices. These practitioners stand a greater chance of winning their stakeholders' support and commitment for their regeneration activities (CLG, 2008). Promoting stakeholder participation will also enable the communities

in which regeneration projects are being developed to express their requirements and aspirations, which could subsequently inform future policy making (Colantonio, 2007). By so doing, other social sustainability issues relating to the projects and the entire communities could also be addressed in a holistic manner. It is argued that sustainable regeneration of society 'can be held back or promoted by the extent to which all individuals have the opportunity to contribute' to it (CLG, 2008: 8). In this regard, it can be suggested that the extent to which sustainable regeneration projects will be able to address individuals' sustainability aspirations will largely depend on how well such individuals' participation is promoted by practitioners' regeneration policies and practices.

8.8 To Promote Profit for Developer and Funders/ROI

A closer observation of the semi-structured interview results in Table 8.1 further reveal that 'to promote profit for developer and funders/ROI' was a very influential/influential policy driver for 20 (95.24%) of the 21 practitioners, while only 1 (4.76%) of the 21 practitioners was fairly/slightly influenced by the aforementioned policy driver. Apart from this one practitioner who held a slightly different view, nearly all the practitioners who participated in the interview phase of the study, were of the view that making profit out of the projects was the main rationale behind the government's policy initiative on sustainable regeneration. They intimated that return on investment from regeneration projects was very crucial for the developer(s) to continue to invest in future regeneration projects. Typically, one practitioner, for instance, highlighted this by saying:

…Ultimately commercial viability of regeneration is the main thing for these policies. Making profit is the bottom line for regeneration projects to be fully sustainable for the developer. …Is about how the developer is able to make return on his/her investment, and we are very much influenced by the government policy on this. …I think the government regeneration policies recognise that, and our policies are pretty much driven by that, because at the end of the day somebody has to find the money to pay for regeneration to take place…

An attempt was also made to validate the above interview results. To this end, data was further collected from 193 practitioners through a questionnaire survey. Of the 193 practitioners who responded to the survey, the results (Table 8.2) show that 88.40% of them were very influenced/influenced by 'to promote profit for developer/funders (ROI)' policy driver, compared to 10.60% of them who were also fairly/slightly influenced by it. From the

'very influential/influential' results obtained, it can be said that the questionnaire survey result (88.40%) validates the semi-structured interview result (95.24%). Clearly, this finding provides enough evidence to suggest that the majority of the current UK regeneration practitioners' organisations' regeneration policies and practices are influenced by this policy driver. This finding is also consistent with the works of authors like Turcsanyi and Sisaye (2013); Henderson (2011); Smyth (2008); and Madlener *et al.* (2003). The finding of the study is also not surprising because for most construction organisations, their primary policy objective for their involvement in the delivery of construction projects is first and foremost to make a profit and return on their investments. It is however important that profitability/return on investment is not only seen in monetary terms. Nonetheless, this can only be the case when practitioners are made to fully understand the long term economic sustainability returns, regeneration projects are able to provide for them and the communities in which these projects are being delivered. The author is of the view that adequate and clear information on how the promotion of fair sustainability practices can contribute to the economic performance of practitioners' organisations could also help to influence practitioners' regeneration policies and practices. Moreover, a good appreciation of what the government's policy initiative is seeking to achieve in relation to this policy driver could also play a role in influencing practitioners' regeneration policies and practices and how they go about promoting this economic sustainability driver on their projects. From the perspective of economic regeneration, profitability of the projects goes beyond just one party making a profit from the projects. Moreover, practitioners who are seen only to be concentrating on profit or a return on their investments could lose the confidence of their core customers. It is suggested that successful regeneration relies on equitable distribution of economic sustainability returns for all the stakeholders. Consequently, the inability for practitioners' policies and practices to promote the achievement of this objective could mean that their regeneration projects would be unable to deliver their economic sustainability benefits for society (HM Treasury, 2007).

8.9 To Promote Jobs and Employment Opportunities

From Table 8.1, it is observed that 20 (95.24%) of the 21 practitioners who participated in the semi-structured interviews were very influenced/influenced by, 'to promote jobs and employment opportunities' policy driver. However, only 1 (4.76%) of the 21 practitioners indicated that the aforementioned policy driver was fairly/slightly influential. Interestingly, the majority of the practitioners who were interviewed believed that there was a strong connection between the sustainable regeneration concept and jobs and employment

opportunities. They were of the opinion that closing the employment gap has been one of the key policy drivers for the regeneration concept in the UK. Therefore, as regeneration practitioners, it was very important for them to meet this policy driver. A typical comment demonstrating this position was made by one of the practitioners by saying:

*…The government policy on jobs and employment do influence us. …The way the central government looks at jobs issues plays a major role in the way we also look at it. …I think the whole idea behind the regeneration concept in the UK has basically being filling the employment gap. …So we can't be seen to be delivering regeneration projects without meeting this policy driver. …*This view was also acknowledged by Lombardi *et al*., (2011).

According to Lombardi *et al*. (2011), the totality of the sustainable regeneration principle proposition is about the promotion and provision of sustainable jobs to stimulate economic sustainable growth. Furthermore, the questionnaire survey results (Table 8.2) obtained from the 193 practitioners, to validate the semi-structured interview results discover that 73.10% of the 193 practitioners were very influenced/influenced by 'to promote jobs and employment opportunities', compared to 25.90% of them who were fairly/slightly influenced by the aforementioned policy driver. A closer look at the 'very influential/influential' results shows that there appears to be some disagreement between the questionnaire survey result (73.10%) and the semi-structured interview result (95.24%). Although both results obtained were over 70%, however, the difference between them shows to be over 20%. The difference could be as a result of the size of sample from which both data was taken and on which the analysis was subsequently performed. Nonetheless, the results are encouraging and provide a good picture that this government policy driver is influencing the majority of practitioners to promote jobs and employment opportunities on their regeneration projects. It is noteworthy to mention that this finding also agrees with the finding obtained in Chapter 6. On the whole, the finding of the present study also lends support to the earlier study carried out by Upstream (2005), in which it was found that most construction organisations that were involved in delivering sustainable housing projects were also addressing employment issues within their policy systems. It is suggested that providing jobs and employment opportunities is another valuable means in which practitioners can contribute their share to the promotion of economic sustainability aspects on their sustainability projects (Upstream, 2005). According to Sultan *et al.* (2006), the contribution of the construction industry practitioners to sustainability should be manifested through the promotion of sustained jobs and employment opportunities.

Economic sustainability issues relating to jobs and employment have an impact on the achievement of other economic sustainability factors. For example, it is strongly argued that people who are in good jobs and employment can contribute to the economic growth and productivity of their communities (Clapham, 2014; Akadiri *et al.*, 2012; CLG, 2008; ESC 2006; Spangenberg, 2005). It is further reported that this can also impact on some social factors, such as the reduction in crime and other anti-social behaviours (CLG, 2008). Therefore, it can be said that practitioners who are seen to be promoting this government policy driver in their policies and practices will make a greater impact in addressing crime issues and unemployment issues and thereby increase the economic sustainability and prosperity among the society they operate in (DBIS, 2013).

8.10 To Promote Value for Money

The semi-structured interview results in Table 8.1 also reveal that 'to promote value for money' was very influential/influential for 18 (85.71%) of the 21 practitioners, while the remaining 3 (14.29%) of the 21 practitioners were also fairly/slightly influenced by the aforementioned policy driver. Promoting value for money objective is one of the cardinal objectives underlying the UK government's sustainable regeneration strategy (CLG, 2010). It is suggested that 'regeneration initiatives should seek to be cost-effective and represent good value for money' (CLG, 2010: 20). During the interview discussions, it was observed that although the majority of practitioners have acknowledged the importance of promoting value for money practices, it became clear that a good number of them were promoting it because they saw it as being one of the requirements they needed to satisfy, particularly when it came to bidding for government regeneration contracts. As one practitioner, for example, demonstrated by saying:

…It has a very significant influence on our practices. …There is always an element of influence when it comes to issues such as value for money and this is one of the things we have to demonstrate when it comes to bidding for government regeneration contracts. …As practitioners, we very much understand that our projects have to meet the value for money requirements that the government wants us to deliver… and that's the way we try to promote it…

The importance and the need for tender documents to demonstrate the achievement of the value for money objective was strongly emphasised by OGC (2011). It is argued that one of

the government's key economic regeneration policy objectives for tendering public-funded sustainable projects is based on a clear value for money justification (OGC, 2011; HM Treasury, 2007). To validate the above interview results, a questionnaire survey study was further carried out. Of the 193 practitioners who participated in the survey phase of the study, the results obtained (Table 8.2) reveal that 78.90% of the 193 practitioners were very influenced/influenced by 'to promote value for money' policy driver, compared to 20.10% of them who were also fairly/slightly influenced by the aforementioned policy driver. An observation of the 'very influential/influential' results indicates a significant level of agreement between the questionnaire survey result (78.90%) and semi-structured interview result (85.71%). Drawing from this agreement, it can be suggested that the majority of UK's regeneration practitioners' regeneration policies and practices are influenced by the aforementioned government policy driver. Although the finding seems to be refreshing, however, currently, it only gives an indication that practitioners who are promoting this policy driver are only encouraged to demonstrate the value for money objective during the bidding process for government regeneration projects. The finding could also mean that some of these practitioners may only be giving consideration to it purely on the basis of securing the projects. Taking these into account, the author believes that backing it up with legislation will enable all practitioners to promote 'value for money' in their policies and practices. By ensuring that all regeneration projects (including the private sector ones) meet such legal requirements, practitioners will not only be encouraged to promote it, but will also be required by law to promote its objectives on all sustainable regeneration projects.

8.11 To Promote Investment in Local Enterprises and Businesses

An inspection of the semi-structured interview results in Table 8.1 also reveals that of the 21 practitioners, 16 (76.19%) of them were of the opinion that 'to promote investment in local enterprises and businesses' was a very influential/influential policy driver, while the remaining 5 (23.81%) of the 21 practitioners were also of the view that the aforementioned policy driver was fairly/slightly influential for them. Evidence that emerged from the analysis of the interviews indicated that the majority of practitioners were mainly promoting this policy driver based on the level of importance the government was attaching to it. They were of the opinion that promoting this policy driver in line with the government's policy initiative was very crucial in helping the government to deliver economic regeneration in the localities. One practitioner, for example, in expressing his view during the interview indicated this by saying:

…The way we tend to promote this depends on the government's policies, because the government set the agenda for us as practitioners. …So it has very much influence on our policies and practices. …I think the government knows that it's almost impossible to deliver regeneration without involving us to help support the local businesses… and I suppose that's the way we can help government to deliver economic regeneration in the localities.

Further to the above interview results, the questionnaire survey results (Table 8.2) obtained from the 193 practitioners in an attempt to validate the interviews results, show that 74.90% of the 193 practitioners were of the opinion that 'to promote investment in local businesses and enterprises' was a very influential/influential policy driver, compared to 22.80% of them who also revealed that the aforementioned policy driver was fairly/slightly influential for them. A further observation of the 'very influential/influential' results indicates a strong agreement between the questionnaire survey result (74.90%) and the semi-structured interview result (76.19%). It is encouraging to observe that this policy driver is being promoted by practitioners in their policies and practices, as this will result in economic sustainability of local businesses/enterprises, filtering down to impacting on the economic sustainability of the entire locality. Similarly, by promoting this policy driver, the capacity to create local jobs and employment opportunities will be enhanced, leading to a reduction of unemployment in the locality (CLG, 2008). Promoting investment in local businesses could also be seen as a way of meeting practitioners' commitments to their corporate social responsibility (CSR) objectives (Okoro, 2012; Martinuzzi *et al.*, 2011). It is believe that practitioners who are seen to be promoting CSR practices, by way of investing in local businesses/enterprises, will stand a better chance of enhancing their reputations and are also more likely to remain competitive in their market place over the long term (Okoro, 2012; Kraus and Britzelmaier, 2012; Lankoski, 2008).

8.12 To Promote Local/Area Economic Growth

The semi-structured interview results in Table 8.1 finally reveals that of the 21 practitioners who participated in the interviews, 15 (71.43%) of them were very influenced/influenced by 'to promote local/area economic growth' policy driver, while the remaining 6 (28.57%) of the 21 practitioners were fairly/slightly influenced by the aforementioned policy driver. It is argued that promoting investment to regenerate an area is 'one element of government's efforts to stimulate economic growth' of an area (CLG, 2008: 130). Explaining how this government's policy driver was influencing them during the interview, the majority of

practitioners argued that because this policy driver was part of the government's economic regeneration policy objectives, it was crucial for them to promote it in their policies and practices. They went on to highlight that since the government policy also placed some responsibility on them as key players, it was very important for them to help discharge that responsibility by giving attention to this policy driver in their policies and practices, as indicated by one practitioner, for example, by saying:

…Of course, it influences our economic sustainability policies towards the local economy. The government recognises our contribution in this area and made it part of its policy objectives. …Government sees the promotion of the local economy as a shared responsibility, and as key players, we are encouraged to promote regeneration activities that help to improve the local economy….

Apparently, this view falls in line with the work of CLG (2008). According to CLG (2008: 3), specific measures that were recommended to ensure economic regeneration of local communities were targeted at ensuring that investment was 'co-ordinated and prioritised in the right places, with public; private; and third sector organisations working together in the same places towards a shared vision'. Such shared vision and priorities between practitioners and government are 'needed to maximise the combined impact of public and private investment' in sustainable regeneration projects in the local communities (HM Treasury, 2007: 59). As a follow up to the semi-structured interview study, the questionnaire survey results (Table 8.2) obtained to validate the interview results, further reveal that 76.70% of the 193 practitioners were very influenced/influenced by 'to promote local/area economic growth' policy driver, compared to 20.20% of them who were also of the view that their regeneration policies and practices were fairly/slightly influenced by the aforementioned policy driver. A closer inspection of the 'very influential/influential' results shows a significant agreement between the questionnaire survey result (76.70%) and the semi-structured interview result (71.43%). On the whole, the finding is inspiring and also gives an indication that a significant percentage of regeneration practitioners in the UK are promoting the aforementioned policy driver in their policies and practices. It can be said that promoting this policy driver has a far reaching impact/implication for the delivery of other economic sustainability factors for the area. For example, areas that are experiencing economic growth can attract more investment into their local businesses/enterprises and enable more jobs to be created. Similarly, in areas with poor economic performance, this can also lead to socio-

economic inequality and deprivation of the people living in those areas (Clapham, 2014; CLG, 2008). It is acknowledged that promoting investment to regenerate a particular locality can help to deliver 'a more diversified economic base and the local infrastructure to enable economic potential' of that locality to be sustained (CLG, 2008: 14). Also, some notable benefits for practitioners who are seen to be promoting this policy driver in their policies includes; enhancement of their organisations' reputations, and winning future sustainable regeneration contracts, as well as winning the support of their stakeholders (local communities). However, it should be stated that the extent to which practitioners can adequately promote this policy driver will largely depend on the nature and objective of their policies and how well their policies are also grounded in the policy objectives of the government. This will also determine how they will dedicate adequate resources to promote this policy driver on their sustainable regeneration projects.

8.13 Summary

The Chapter presented the data analysis, discussion and findings on eleven UK government's socio-economic sustainability policy drivers (six social and five economic) and noted the following key findings and recommendations. On the whole, it was observed from the Chapter that all the eleven policy drivers were influencing practitioners' socio-economic regeneration policies and practices.

Specifically it was observed that 19 (90.48%) of the 21 practitioners who participated in the semi-structured interviews were very influenced/influenced by 'to promote health and safety of workforce and local community/residents' policy driver, while the remaining 2 (9.52%) of the 21 practitioners were also fairly/slightly influenced by the aforementioned policy driver. Similarly, 84.60% of the 193 practitioners who took part in the questionnaire survey phase of the study were very influenced/influenced by 'to promote health and safety for workforce and local community/residents' policy driver. Likewise, 14.90% of them were fairly/slightly influenced by the aforementioned policy driver. From this finding, it became clear that the majority of current regeneration practitioners in the UK were becoming aware of the opportunities and implications of promoting health and safety on their sustainable regeneration projects and therefore making sure that this policy driver was given attention in their regeneration policies and practices.

The Chapter further revealed that 18 (85.71%) of the 21 practitioners who took part in the interview were very influenced/influenced by 'to promote affordable housing' policy driver, while the remaining 3 (14.29%) of the 21 practitioners were also fairly/slightly influenced by the aforementioned policy driver. Also, 85% of the 193 practitioners who participated in the questionnaire survey phase of the study were very influenced/influenced by 'to promote affordable housing' policy driver. Likewise, 14.60% of the 193 practitioners were also fairly/slightly influenced by the aforementioned policy driver. The finding gave a clear indication that the majority of the UK's regeneration practitioners' regeneration policies and practices were aligned to the government's sustainable housing policy initiatives. However, the author was of the view that over emphasising the policies and practices on housing-led regeneration could potentially limit the promotion of other types of regeneration projects, which equally impact positively on other social sustainability factors. It was further observed that 'to promote education and skill training' was very influential/influential for 15 (71.43%) of the 21 practitioners who participated in the semi-structured interviews, while the remaining 6 (28.57%) of the 21 practitioners were also fairly/slightly influenced by the aforementioned policy driver. Similarly, 63.80% of the 193 practitioners who participated in the questionnaire survey phase of the study were very influenced/influenced by 'to promote education and skill training' policy driver. Likewise, 34.20% of the 193 practitioners were also fairly/slightly influenced by the aforementioned policy driver. Following this finding, it was concluded that a significant number of the current UK regeneration practitioners' 'education and training' policies and practices were influenced by the aforementioned UK government's policy driver. For practitioners who were not promoting this policy driver adequately in their policies and practices, it was suggested that the perceived cost of providing education and training, as well as lack of awareness could have been some of the reasons behind their inability to do so.

The Chapter also revealed that 14 (66.67%) of the 21 practitioners who participated in the interviews were very influenced/influenced by 'to promote security/wellbeing of the area' policy driver, while 7 (33.33%) of the 21 practitioners were fairly/slightly influenced by the aforementioned policy driver. Similarly, 76.20% of the 193 practitioners who participated in the questionnaire survey were very influenced/influenced by 'to promote security/wellbeing' policy driver. Likewise, 22.80% of them were also fairly/slightly influenced by it. The finding also provided an indication that the majority of practitioners were promoting security and wellbeing issues in their regeneration policies and practices. Although the finding appeared encouraging, it was suggested that more work needed to be done to educate practitioners who

were still not promoting this policy driver adequately on their projects. Furthermore, it was observed that of the 21 practitioners who took part in the semi-structured interviews, 13 (62%) of them were very influenced/influenced by 'to promote the physical outlook of the area', while 8 (38%) of the 21 practitioners were also fairly/slightly influenced by the aforementioned policy driver. Equally, 68.40% of the 193 practitioners who participated in the questionnaire survey were very influenced/influenced by 'to promote the physical outlook of the area' policy driver. Likewise, 30.60% of them were fairly/slightly influenced by it. The finding also provided an indication that most UK sustainable regeneration practitioners' policies and practices were given attention to improving the physical outlook of their regeneration projects. A major deduction that was made from this finding was that because the physical outlook was often seen to be more of a visible and tangible factor than other social sustainability factors, practitioners were more likely to be influenced to promote it in their policies and practices. In view of this, the author cautions practitioners not to over emphasised enhancing the physical outlook, since doing so could lead to the neglect of other equally important social sustainability factors. From the Chapter, it was further discovered that 11 (52.38%) of the 21 practitioners, who were interviewed, were very influenced/influenced by 'to promote stakeholders participation' policy driver, while 10 (47.62%) of the 21 practitioners were also fairly/slightly influenced by the above mentioned policy driver. Furthermore, 57.60% of the 193 practitioners who took part in the questionnaire survey, were very influenced/influenced by the aforementioned policy driver, likewise 39.80% of them were fairly/slightly influenced by it. One major issue that was noticed in this finding was that while over 50% of practitioners were being influenced by this policy driver, a significant number of them only seemed to be giving lip-service to this policy driver.

The Chapter also revealed that 'to promote profit for developer and funders/ROI' was a very influential/influential policy driver for 20 (95.24%) of the 21 practitioners who took part in semi-structured interviews, while only 1 (4.76%) of the 21 practitioners was fairly/slightly influenced by the aforementioned policy driver. Similarly, it was revealed that 88.40% of the 193 practitioners who responded to the survey were very influenced/influenced by the aforementioned policy driver, likewise 10.60% of them were fairly/slightly influenced by it. Drawing from this finding, it was suggested that the majority of the current UK regeneration practitioners' organisations' policies and practices were largely influenced by this policy driver. However, the author admonish practitioners not to just consider profitability/return on investment from sustainable regeneration projects only in monetary terms. It was also

suggested that a good appreciation of what this policy driver was seeking to achieve was important to enable them to focus their regeneration policies and practices on the core objective of this policy driver.

The Chapter also established that 20 (95.24%) of the 21 practitioners who participated in the semi-structured interviews were very influenced/influenced by 'to promote jobs and employment opportunities' policy driver, while only 1 (4.76%) of the 21 practitioners was fairly/slightly influenced by the aforementioned policy driver. Also, of the 193 practitioners who participated in the questionnaire survey, 73.10% of them were very influenced/influenced by 'to promote jobs and employment opportunities' policy driver, likewise 25.90% of them were also fairly/slightly influenced by the above mentioned policy driver. It was also discovered that 'to promote value for money' was very influential/influential for 18 (85.71%) of the 21 practitioners who took part in the interviews, while 3 (14.29%) of the 21 practitioners were also fairly/slightly influenced by the aforementioned policy driver. In terms of the questionnaire survey, 78.90% of the 193 practitioners were very influenced/influenced by 'to promote value for money' policy driver, while 20.10% of them were fairly/slightly influenced by the aforementioned policy driver.

Furthermore, it was observed that 16 (76.19%) of the 21 practitioners who participated in the semi-structured interviews were very influenced/influenced by 'to promote investment in local businesses and enterprises' policy driver, while 5 (23.81%) of the 21 practitioners' regeneration policies and practices were also fairly/slightly influenced by the aforementioned policy driver. Similarly, 74.90% of the 193 practitioners who took part in the questionnaire survey phase of the study were very influenced/influenced by 'to promote investment in local businesses and enterprises', while 22.80% of them were fairly/slightly influenced by the above mentioned policy driver. This finding was seen to be encouraging, as the author was of the view that promoting this policy driver could potentially result in the creation of more jobs and employment opportunities within the local communities. Finally, the Chapter discovered that 15 (71.43%) of the 21 practitioners who participated in the semi-structured interviews were very influenced/influenced by 'to promote local/area economic growth' policy driver; likewise the remaining 6 (28.57%) of the 21 practitioners were also fairly/slightly influenced by the aforementioned policy driver. In the case of the questionnaire survey findings, 76.70% of the 193 practitioners were very influenced/influenced by the above mentioned policy driver, while 20.20% of them were also fairly/slightly influenced by the aforementioned

policy driver. This finding was seen to be inspiring and also gave an indication that a significant percentage of regeneration practitioners were promoting this policy driver in their policies and practices. It was suggested that by promoting this policy driver, the economic sustainability performance of local businesses and enterprises could also be enhanced. The next Chapter presents the analysis and discussion on the evaluation practices and the development of the evaluation framework.

CHAPTER 9 EVALUATION PRACTICES AND DEVELOPMENT AND VALIDATION OF THE EVALUATION FRAMEWORK FOR SOCIO-ECONOMIC REGENERATION PROJECTS

9.1 Introduction

The aim of this Chapter is to address objective seven and also the last objective which was to develop a framework for the evaluation of socio-economic sustainability benefits of sustainable regeneration projects. The Chapter commences by presenting a brief outline of the literature, data analysis and discussion on the evaluation process. Data for the analysis and discussion is obtained from 21 practitioners through semi-structured interviews and 193 practitioners through a questionnaire survey. It further presents a discussion on the key components of the proposed framework, drawing largely on the findings from Chapters 5, 6, 7 and 8. It also provides the description of the framework as well as the evaluation process, highlighting the benefits, application, implications and limitations of the proposed framework. It then goes on to present the data analysis of the validation results obtained from ten (10) practitioners, through a questionnaire survey. The Chapter concludes by presenting the final framework, reflecting on the recommendations from practitioners.

9.2 Evaluation Process, Data Analysis and Discussion

One major characteristic of a good evaluation is about the process it adopts when undertaking an evaluation of a project. It is widely argued that a good evaluation should not only focus on the achievement of the project's objectives, but also consider the processes it adopts to achieve those objectives. According to Jack and Breeze (2008), in order to carry out any meaningful evaluation of a sustainable regeneration project, it is important to develop a common evaluation approach that specifies the processes required to be followed, as this will enable a systematic evaluation of the factors concerned.

Practitioners who participated in the semi-structured interviews were presented with an evaluation process (four stages) identified through the review of the literature (Table 2.6), made up of; background information gathering (stage-1), factors identification (stage-2), data collection and analysis (stage-3), and presentation of findings (stage-4). The aim was to ascertain whether practitioners' evaluation practices were adopting/following the best practice towards the evaluation of their regeneration projects. CLG (2009) asserted that the rationale behind adopting an evaluation process is not about prescribing a rigid approach to evaluation

but is about providing an indicative and systematic outline for practitioners seeking to produce high standards of evaluation work to follow. During the interviews, when practitioners were asked about the extent to which their evaluation practices were following the aforementioned evaluation process, it emerged from the results (Table 9.1) that, of the 21 practitioners, only 5 (23.81%) of their evaluation practices were very highly/highly following the above mentioned evaluation process. A good number of practitioners' evaluation practices, 9 (42.86%) were also found to be following the aforementioned evaluation process to some/limited extent. However, it was further observed that 7 (33.33%) of the 21 practitioners' evaluation practices were not following it to any extent at all. Commenting on their evaluation practices during the interview, some practitioners were of the view that their evaluation practices were based on the nature of the regeneration projects they were involved in. A notable view expressed, particularly by one of the practitioners, whose evaluation practices were adopting 'some or limited' aspects of the aforementioned evaluation process, typically stated that:

...We do adopt some of these processes for our evaluation and benchmarking, although we do not follow all of them as they appear here. ...again, the kind of evaluation processes we adopt also depend on the kind of project we are involved in. ...We tend to address as soon as possible where the greatest sustainability impact may be available in a particular project.

The aforementioned evaluation process was further presented to the 193 practitioners through a questionnaire survey. The results obtained (Table 9.2) indicate that, of the 193 practitioners, 24.7% of their evaluation practices were very highly/highly following it, compared to 45.2% of them whose evaluation practices were also following it to some/limited extent. The results further suggest that 30.1% of practitioners' evaluation practices were not following this evaluation process to any extent at all. A closer observation of the results reveals a significant level of agreement between the semi-structured interviews results and the questionnaire survey results. Largely, from this finding, it can be suggested that most of the UK's sustainable regeneration practitioners' evaluation practices are not based on any structured and systematic evaluation process. Evidence from this finding further provides an indication that a significant percentage of the current regeneration practitioners in the UK are not following any clearly specified and consistent evaluation process to undertake the evaluation of their regeneration projects. This could be due to a lack of interest from practitioners to undertake evaluations that are perceived to be underpinned by rigorous methodologies and

processes. Usually, the process involved in carrying out an evaluation of a sustainability project is often 'seen as an additional task to be completed by an already overworked programme or project manager' (Jack and Breeze, 2008: 11). However, the inability to follow such a systematic process could result in some key activities and factors being left out and ultimately, hamper the evaluation work in achieving its objectives. It is believed that the extent to which a successful evaluation of regeneration project can be achieved will largely depend on the extent to which practitioners' evaluation practices are able to adopt thorough evaluation processes. The author is of the opinion that practitioners could be more receptive to adopting an evaluation process that is developed with their involvement. Also, it can be suggested that the introduction of a simpler and a more user-friendly process could potentially change practitioners' attitudes towards greater adoption of evaluation process that is capable of measuring the socio-economic sustainability outcomes of their regeneration projects (McQuaid *et al.,* 2006). The next section presents the discussion on the proposed conceptual framework.

Table 9.1: Semi-structured interview results of the evaluation process

Practitioners Total N = 21		
To a very high extent / high extent	To some/limited extent	To no extent at all
5 (23.81%)	9 (42.86%)	7 (33.33%)

Table 9.2: Questionnaire survey results of the evaluation process

To a very high extent	To a high extent	To some extent	To limited extent	To no extent at all
10.2%	14.5%	19.4%	25.8%	30.1%

9.3 Proposed Conceptual Framework

The last objective of this research was to develop a conceptual framework that can be used as a practical tool to guide regeneration practitioners to evaluate the socio-economic sustainability benefits of their sustainable regeneration projects. It has been identified that there are problems associated with the evaluation and delivery of socio-economic sustainability benefits of sustainable regeneration projects within the construction industry in the UK. This has necessitated the need for this research to develop an evaluation framework

that could be used to address the problem. It is anticipated that the problems associated with the evaluation and delivery of social and economic sustainability benefits of sustainable regeneration projects would be addressed through the use of this proposed framework. It is also believed that applying such a framework can also help to enhance the knowledge and understanding of practitioners on a wide variety of socio-economic sustainability issues of regeneration projects (Delgado-Hernandez and Aspinwall, 2008).

The proposed conceptual framework stems from the literature review (Chapter 2), semi-structured interviews and questionnaire survey data collected and analysed in Chapters 5, 6, 7, 8 and 9, respectively. According to Jabareen (2009), the development of a conceptual framework is a process of theorisation which should be based on data collected from multiple sources. Hence, in order to develop the proposed conceptual framework, this present study has focused on the collection of key information through the review of literature, qualitative (semi-structured interviews) and quantitative (questionnaire survey) data from sustainable regeneration practitioners in the UK. The qualitative data was obtained through semi-structured interviews with twenty one (21) practitioners from three construction organisations, with the knowledge and experience in the delivery of sustainable regeneration projects in the UK. This was followed up with quantitative data obtained through a questionnaire survey from one hundred and ninety three (193) practitioners involved in the delivery of sustainable regeneration projects within the UK's construction industry. The main components defining the proposed conceptual framework as shown in Figure 9.1 are presented below.

9.4 The UK Government's Policy Drivers

The sixth objective set out by this research was to explore the main socio-economic regeneration policy drivers of the UK government that were influencing the socio-economic regeneration policies and practices of practitioners in the UK. The literature review in Chapter 2, and the interviews and questionnaire survey findings in Chapter 8 revealed a number of the UK government's social and economic sustainability policy drivers that were influencing regeneration practitioners to promote the social and economic sustainability factors in their sustainable regeneration policies and practices. The emergence of the UK government's social and economic sustainability policy initiatives in the construction industry is influencing practitioners' quests towards the promotion and delivery of sustainable regeneration projects. The government provides various aspects of regeneration policy initiatives aimed at improving people's socio-economic conditions. Currently, the government is demanding that

regeneration practitioners demonstrate their abilities to deliver sustainable regeneration projects that address the socio-economic challenges of people. In attempt to continue to secure public sector projects, many practitioners are aligning their sustainability policies and practices to the policy initiatives set out by the UK government.

Apparently, all the eleven (six social, five economic) policy drivers presented to practitioners were influential to them. In terms of the social sustainability policy drivers, the interview results indicated that promoting health and safety was the most influential policy driver. Promoting affordable housing, and education and skill training opportunities were the second and third most influential policy drivers. These were followed by promoting security/wellbeing, the physical outlook of the area and stakeholder participation as the fourth, fifth and sixth most influential policy drivers, respectively. For the economic sustainability policy drivers, the interview results revealed that promoting profit for the developer and funders/return on investment, and jobs and employment opportunities were the most influential policy drivers, followed by promoting value for money as the third most influential policy driver. Promoting investment in local businesses and enterprises was the fourth, followed by promoting local/area economic growth as the fifth most influential policy driver. These interview results were further strengthened by the questionnaire survey results. Practitioners who participated in the questionnaire survey phase of the study were also presented with the aforementioned UK government's policy drivers and were asked to rank the degree of influence these policy drivers were having on their quest to promote socio-economic sustainability in their policies and practices. The results also (Chapter 8) indicated that between 57% and 85% of practitioners were very influenced/influenced by all the six (6) social sustainability factors presented to them, while between 14.60% and 39.80% of them were fairly/slightly influenced by the six social sustainability factors. The results (Chapter 8) further revealed that between 73% and 88.40% were very influenced/influenced by all the five economic sustainability factors presented to them, while between 10.60% and 25.90% of them were also fairly/slightly influenced by the five economic sustainability factors. The results obtained from the questionnaire survey were used to validate the interview results. These influential policy drivers were further used to develop the initial conceptual framework as illustrated in Figure 9.1.

9.4.1 Organisational Drivers

The third objective set out by this research was to explore the important organisational social and economic sustainability drivers for sustainable regeneration projects in the UK. The quest to deliver sustainable regeneration projects is also driven by other factors. The literature review in Chapter 2 and the semi-structured interviews and questionnaire survey findings in Chapter 5 revealed a number of important socio-economic sustainability factors, driving practitioners in their quest to deliver sustainable regeneration projects. The organisational drivers were first explored with practitioners through semi-structured interviews. The organisational drivers that were identified included; enhancement of reputation as a 'sustainable' organisation, competitive advantage, client requirements, corporate social responsibility, stakeholders demand, ethical and moral obligations, commitment to sustainability objectives, and legislation and legal requirements. It is acknowledged that the current delivery of sustainable regeneration projects in the UK is a direct product of these organisational drivers. The current view is that organisations that are genuinely committed to pursuing sustainability principles, meeting their clients', key stakeholders' and legislation and legal and requirements, are potentially branding their images and gaining competitive advantage over their peers. Regeneration practitioners are now being encouraged to adopt and implement socio-economic sustainability factors as a way of meeting their corporate social responsibility obligations towards society.

Subsequently, the above drivers were subjected to further exploration with practitioners through a questionnaire survey (Chapter 5). In this process, practitioners were also asked to rate the importance these identified organisational drivers were having on their efforts to adopt and implement socio-economic sustainability factors in their sustainable regeneration projects. The results indicated that the enhancement of reputation as a 'sustainable' organisation was ranked the most important driver, followed by competitive advantage as the second most important driver. Clients' requirements was the third most ranked organisational driver, while corporate social responsibility came the fourth most ranked organisational driver. Commitment to sustainability objectives was the fifth most ranked organisational driver, followed by ethical and moral obligations, and stakeholders' demand the sixth and seventh most ranked organisational drivers, respectively. The eight most important organisational driver ranked by practitioners was legislation and legal requirements. The above organisational drivers which were identified through the literature review and explored through the semi-structured interviews and questionnaire survey with practitioners, form the

basis for the development of the initial proposed framework (Figure 9.1) for the present research.

9.4.2 Organisational Barriers

This issue addresses objective five of the research which is concerned with the exploration of 'organisational' socio-economic sustainability barriers impeding practitioners to adopt and implement socio-economic sustainability factors in their regeneration projects. In spite of the numerous potential benefits identified for adopting and implementing sustainability principles, there are also barriers. There are many socio-economic sustainability issues that act as major barriers towards the successful delivery of sustainable regeneration projects in the UK. The review of the literature (Chapter 2) and the results obtained from practitioners through the semi-structured interviews and questionnaire survey (Chapter 7) revealed the organisational barriers impeding practitioners to adopt and implement socio-economic sustainability factors in their regeneration projects. These barriers included; lack of funding/financial support, unfavourable contract requirements/conditions, lack of client willingness to adopt sustainability, perception that sustainability is costly, conflicts with the organisations' business objectives, conflict with stakeholder interests, and socio-economic sustainability not being a priority for the organisation. These aforementioned barriers were first explored with practitioners through the semi-structured interviews and were further explored with practitioners through the questionnaire survey (Chapter 7). Practitioners who took part in the questionnaire survey phase of the study were asked to rank the level of significance these organisational barriers were having on their quest to adopt and implement socio-economic sustainability factors in their regeneration projects. The results obtained showed that 'lack of funding/financial support' was the most significant organisational barrier, followed by 'unfavourable contract requirements/conditions' and 'lack of client willingness to adopt sustainability' the second and third most significant organisational barriers, respectively. The perception that sustainability is costly was the fourth most ranked significant organisational barrier, followed by 'conflicts with our organisation business objectives' the fifth most ranked significant organisational barrier. 'Conflict with stakeholder interest' and 'socio-economic sustainability not a priority for our organisation' were ranked the sixth and seventh most significant organisational barriers, respectively. The aforementioned organisational barriers were then used to develop the initial framework as presented in Figure 9.1. In terms of delivering sustainable regeneration in the UK, these organisational barriers have played a substantial role in determining how the socio-economic

sustainability factors have been articulated on many regeneration projects by practitioners. Although the construction industry practitioners seem to have accepted the sustainability concept, applying its core principles has been lacking and in many instances becomes very difficult to pursue in practical terms. The lack of financial support is often cited as a major barrier to adopt and implement socio-economic sustainability factors in regeneration projects, especially during this period of economic crisis. Generally, sustainability has been perceived to carry a higher financial burden with limited or no return on investments for practitioners. This was largely reflected in this finding. The perception of high cost of investment and lower investment returns for sustainability in contrast to the traditional projects, are often seen as barriers to adopt and implement sustainability by practitioners in their regeneration projects. The lack of demand for sustainability, as well as unfavourable requirements from clients and other key stakeholders also play a major role in acting as a barrier towards the promotion of the socio-economic sustainability agenda in regeneration projects. For many practitioners, the issue of conflict of interest with their organisations' business objectives is the major problem, limiting their ability to pursue socio-economic sustainability on their regeneration projects.

9.4.3 Socio-economic Sustainability Factors

The fourth objective of the present research was to explore the extent to which consideration was given to the promotion of socio-economic sustainability factors on sustainable regeneration projects. To achieve this objective, a literature review (Chapter 2) was carried out which was further supported by semi-structured interviews and a questionnaire survey with regeneration practitioners within the construction industry in the UK. The results (Chapter 6) that emerged from the interviews showed that practitioners were promoting the following key social sustainability factors; health and safety of the workforce and local community/residents, education and training/apprenticeship opportunities, affordable housing, stakeholders participation (including local community), community security/wellbeing, and physical appearance/positive image of the local environment. Similarly, in terms of the economic sustainability factors, the results (Chapter 6) indicated that practitioners were promoting value for money, profitability for investors/developer (return on investment), employment opportunities, local/area economic growth, and local community organisations/enterprises. To corroborate the above interview results, the issues were explored further with practitioners through a questionnaire survey study. Practitioners who participated in the survey were asked to rank the degree of consideration they were given to promoting the aforementioned socio-economic sustainability factors on their regeneration projects. The

survey results (Chapter 6) obtained for the social sustainability factors indicated that 88% were given a very high/high degree of consideration to promoting 'health and safety of workforce and local community/residents', while over 80% were given a very high/high degree of consideration to promoting 'education and training/apprenticeship opportunities'. Over 85% were found to be given a very high/high degree of consideration to promoting 'affordable housing', while 79.0% were given a very high/high degree of consideration to promoting 'stakeholder participation (including local community)'. For 'community security/wellbeing', 82.4% were given a very high/high degree of consideration to promoting it, while 74.1% were found to be given a very high/high degree of consideration to promoting 'physical appearance/positive image on local environment'. In terms of economic sustainability factors, the survey results (Chapter 6) showed that over 88% of practitioners who participated in the survey phase of the study were given a very high/high degree of consideration to promoting 'value for money', while 85.1% were given a very high/high degree of consideration to promoting 'profitability for investors/developer (return on investment)'. 80.0% were given a very high/high degree of consideration to promoting 'jobs and employment opportunities', likewise 66.5% were given a very high/high degree of consideration to promoting 'local/area economic growth'. Also, 77.7% were given a very high/high degree of consideration to promoting 'local community organisations/enterprises'. Currently, many public sector regeneration projects are being awarded to practitioners who are promoting these social and economic sustainability factors on their regeneration projects. The emergence of considerate contractor schemes, coupled with the activities of the Health and Safety Executives is contributing to practitioners' quests to promote health and safety practices on their projects. Promoting training/apprenticeship opportunities and stakeholder participation are also becoming key requirements public sector clients are demanding. The practitioners who are promoting the 'security/wellbeing' social sustainability factor and upgrading the physical outlook of the communities, are gaining support from the communities for their regeneration activities. Most of the current regeneration projects taking place in the UK are in the housing sector, hence, it was not surprising to see affordable housing being promoted by the majority of practitioners. From the economic sustainability perspective, value for money is one such economic sustainability requirement practitioners are expected to satisfy for public funded regeneration projects. This finding shows that practitioners are becoming aware of this requirement. The interview results showed that over 85% of practitioners' regeneration practices are promoting profitability/return on investment. It is considered as a means by which they could remain economically sustainable. As a means of

reducing unemployment, poverty and deprivation, practitioners are also being encouraged to promote jobs and employment opportunities, invest adequately into the local/area economy, and organisations/enterprises in which they are operating.

9.4.4 Evaluation Process

Objective seven of this research was to explore the current evaluation practices and processes that were being adopted to evaluate the socio-economic sustainability factors of sustainable regeneration projects in the UK. The need to ensure that evaluation is carried out through a well-defined process is considered as central to achieving the successful evaluation of a sustainable regeneration project. In order to address this objective, practitioners, through semi-structured interviews and the questionnaire survey were presented with an evaluation process identified through the review of the literature (Table 2.6). This evaluation process was made up of four main stages; background information gathering (stage-1), factors identification (stage-2), data collection and analysis (stage-3), and presentation of findings (stage-4). The main aim was to establish the extent to which practitioners' evaluation practices were adopting/following the best practice and systematic processes towards the evaluation of their sustainable regeneration projects. Conducting an evaluation exercise through the use of qualitative and quantitative approaches is an important means through which the soft and hard issues can be adequately explored. The semi-structured interview results (Table 9.1) obtained showed that, out of 21 practitioners, 5 (23.81%) of their evaluation practices were very highly/highly following the aforementioned evaluation process, while 9 (42.86%) of their evaluation practices were also following it to some/limited extent. However, it was observed that 7 (33.33) of the 21 practitioners' evaluation practices were not following the above mentioned evaluation process to any extent at all. The results (Table 9.2) obtained when the aforementioned evaluation process was subsequently presented to practitioners, through the questionnaire survey revealed that 24.7% of the 193 practitioners' evaluation practices were very highly/highly following it, compared to 45.2% of them whose evaluation practices were also following it to some/limited extent. The survey results further revealed that 30.1% of the 193 practitioners' evaluation practices were not following it to any extent at all.

Considering the poor sustainability performances of past regeneration projects, most communities where sustainable regeneration projects are being provided are now demanding evidence, hence, calling for thorough evaluation of the projects to be conducted. There are

valuable benefits for practitioners who are ensuring that their evaluation practices are adopting a good and systematic evaluation process. Some of these may include; evidence for future funding opportunities, policy formulation, lesson learning, avoidance of duplication and also tracking the performance of the projects.

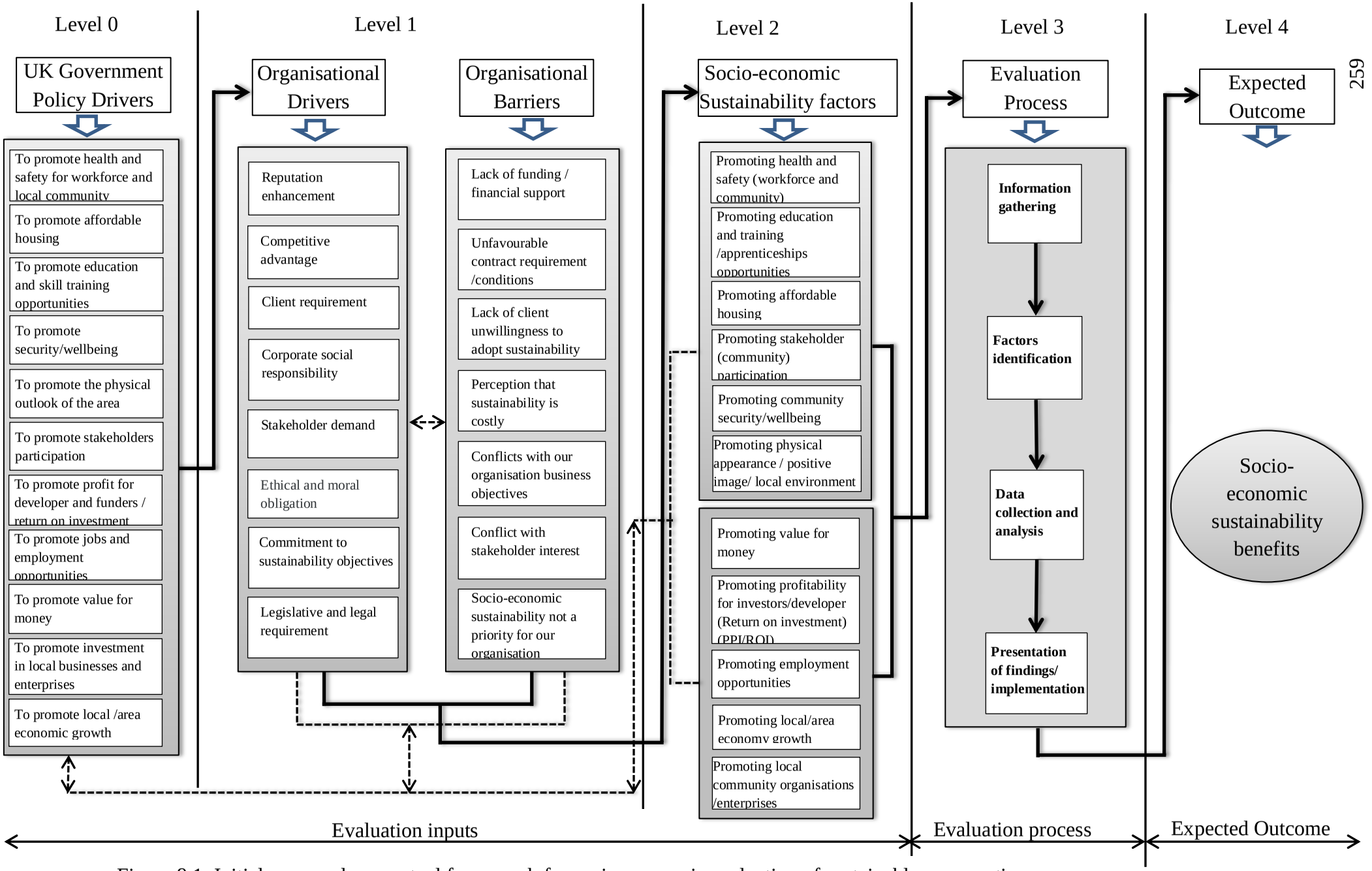

Figure 9.1: Initial proposed conceptual framework for socio-economic evaluation of sustainable regeneration

9.5 Description of the Conceptual Framework

This conceptual framework (Figure 9.1) aims to provide a useful practical tool to guide practitioners to identify and consider the evaluation inputs (Level 0 - Level 2) and the evaluation process (Level 3) to be followed, to enable the successful evaluation and delivery of socio-economic sustainability benefits (Level 4) of sustainable regeneration projects.

The conceptual framework consists of five main levels, namely; the UK's government policy drivers (Level 0), the organisational drivers and barriers (Level 1), the socio-economic sustainability factors (Level 2), the evaluation process (Level 3) and benefits (Level 4). The thick arrow lines connecting each level indicate the direction of consideration or dependency that is between the Levels 0 - 4, while the dotted arrow lines show the interdependency or the interplay that is between the Levels 0 - 2 evaluation inputs. Although, in most cases, practitioners tend to give consideration to Levels 0 - 2 evaluation inputs as shown by the direction of the thick arrow lines in this conceptual framework, either Level '0' and/or Level '1' or even Level '2' evaluation inputs can be considered alongside them as indicated by the dotted arrow lines. In other words, any one or two of the evaluation inputs can be considered at the same time, without necessarily following the conventional direction as indicated by the thick arrow lines.

Level 0: This level allows practitioners/organisations to identify and consider the key UK government's policy drivers on which sustainable regeneration projects are initiated. In other words, it provides what (socio-economic sustainability benefits) a particular sustainable regeneration project or initiative is intended to deliver at any particular point in time. This level enables practitioners/organisations to identify and consider what a particular sustainable regeneration project being initiated is intended to deliver, in line with their own policies, practices, resource requirements, etc. The identification and consideration of the policy drivers underlying the regeneration project(s) provides useful information for practitioners/organisations to proceed to Level '1'.

Level 1: After ascertaining the government's (socio-economic sustainability) policy drivers that are underlying the regeneration project, the next thing is to identify and consider them in line with the organisation's drivers and barriers. The organisational drivers enable the practitioners/organisations to identify and consider the potential project(s) in terms of its advantages or benefits to the practitioners/organisations and other stakeholders, vis-à-vis the

government policy driver(s) as identified and considered in Level '0'. The organisational barriers on the other hand, enable the practitioners/organisations to identify and consider the potential project(s) against what the practitioners/organisations perceive to be the main barriers that are likely to impede their practices and efforts from undertaking the project to meet the government's (socio-economic sustainability) policy driver(s), as identified in Level '0'.

Level 2: This level of the conceptual framework follows after the identification and consideration of the organisational drivers and barriers. The level allows for the identification and selection of the social and economic sustainability factors for the regeneration project. The social and economic sustainability factors that are identified in line with the government's (socio-economic sustainability) policy drivers, and the organisational drivers and barriers are selected for the evaluation process to begin in Level '3'.

Level 3: This level allows for the government policy drivers, the organisational drivers and barriers and the social and economic sustainability factors considered from Level 0 through to Level 2, to be thoroughly evaluated. It consists of four stages: information gathering, factors identification, data collection and analysis and presentation of findings. The evaluation process is further described in section 9.5 below.

Level 4: This level which is the final level of the conceptual framework is concerned with the delivery of the expected socio-economic sustainability benefits of the project(s). The delivery of these expected (socio-economic sustainability) benefits largely depends on the consideration given to the evaluation inputs and the evaluation process undertaken to evaluate them. These expected outcomes are the social and economic sustainability benefits required from the successful delivery of sustainable regeneration project(s) for all the stakeholders (including practitioners' organisations) involved in the delivery of the project(s).

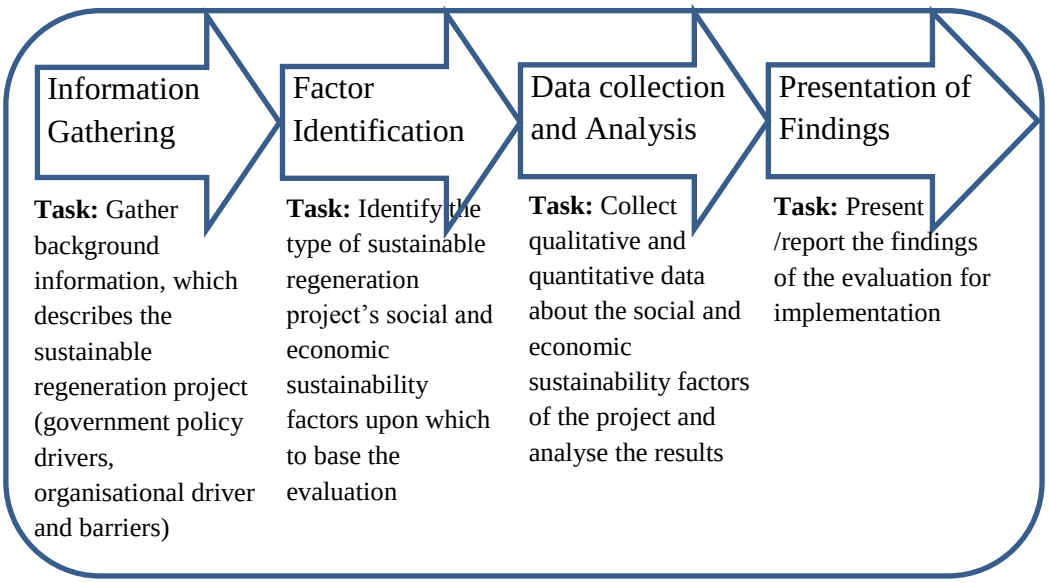

Figure 9.2: The evaluation process (stages)

9.6 Description of the Evaluation Process

Information gathering: The objective of information gathering involves obtaining the key background information which describes the sustainable regeneration project to be undertaken. The key background information required to be gathered at this stage of the evaluation process includes the government policy drivers and organisational drivers and barriers for the project. The information gathered at this stage of the evaluation process provides the basis for the evaluation work to proceed to the next stage of the evaluation process, factor identification.

Factor identification: In order to ensure successful evaluation of a sustainable regeneration project, it is essential that the sustainability factors underpinning the project are identified, classified distinctly, and streamlined (McQuaid *et al*, 2006; Department of the Environment (DoE), 1997). At the factor identification stage of the evaluation process, the key important task that is required to be undertaken involves identifying the main social and economic sustainability factors upon which the evaluation of the sustainable regeneration project is based. The identification of the project's social and economic sustainability factors is carried out in relation to the government's policy drivers and organisational drivers and barriers, defining the project at the information gathering stage of the evaluation process.

Data collection and analysis: Evaluation depends on obtaining and analysing data relevant to the objective of the evaluation work (Department of Trade and Industry (DTI), 2006). The

data collection and analysis stage which follows the factor identification stage of the evaluation process, involves the collection and analysis of both qualitative and quantitative data. This is carried out after gathering and identifying all the information and the socio-economic sustainability factors which the evaluation work should thoroughly consider and evaluate. It involves using two main types of data collection approaches which are based on the two research methodologies; qualitative and quantitative. The data obtained through their use is analysed either using manual means or through the use of software (e.g. Nvivo for qualitative data, SPSS for quantitative data). Using both research methods with such data collection and analysis approaches to evaluate the soft and hard issues, is also strongly recommended by CLG (2009) and McQuaid *et al.* (2006).

Presentation of the findings: The presentation of the findings, which is the final stage of the evaluation process, involves the presentation of the findings/writing to ensure that a record is provided of the evaluation work that has been carried out throughout the evaluation process. This will enable the findings resulting from the evaluation work to be implemented, leading to the delivery of the socio-economic sustainability benefits of the sustainable regeneration project.

9.7 Application, Implications and Limitations of the Proposed Evaluation Framework

One major issue which requires consideration when developing an evaluation framework, is how it is going to be operationalised (DTI, 2006). Furthermore, it is equally important that the parameters underpinning such frameworks are clearly outlined, to enable users to make effective use of such frameworks in practice. In view of these, the proposed framework (Figure 9.1) applications, implications and limitations are provided below.

The application of this framework can be done at the pre-construction or post-construction stages of the project delivery, and hence can be used for both forward and backward evaluation purposes (DTI, 2006). Regeneration practitioners who are about to start delivering sustainable regeneration projects can make use of the proposed framework as a forward planning evaluation tool to guide them to evaluate the 'evaluation inputs' that are required to enable their projects to deliver their social and economic sustainability benefits. Similarly, it can also be used by regeneration practitioners who want to evaluate/determine what socio-economic sustainability benefits have been delivered from undertaking a particular

regeneration project (backward evaluation purposes). Using it at the post-construction stage of the project will provide practitioners the opportunity to learn lessons for the delivery of their future regeneration projects. The need for evaluation to be conducted in the spirit of learning a lesson is also explicitly recommended by HM Treasury (2011) and DTI (2006).

Applying this proposed evaluation framework will also have some wider positive implications for the UK government, the local communities and practitioners. Firstly, it will enable sustainable regeneration projects to be delivered in a manner that will help the government to address some of the socio-economic sustainability deprivation/challenges in the local communities where sustainable regeneration projects are carried out. Secondly, it will enable regeneration practitioners in the UK to become aware of the main evaluation inputs and also improve their performance in the area and with the delivery of socio-economic regeneration projects. Thirdly, it will facilitate and enhance practitioners' ability to evaluate and determine speedily, the benefits of the projects to their organisations and also to all the other stakeholders of the projects.

However, despite the positive implications, there are also some limitations for using this proposed framework. Notably, the proposed framework's ability to ensure an effective evaluation of the 'evaluation inputs' of the project is hampered when it is only applied during the construction stage (i.e. after the project has begun) of the project development. Hence, it is recommended that the proposed evaluation framework is applied as stated above. Similarly, changes to the government's socio-economic sustainability policy drivers may also have an impact on the other 'evaluation inputs' and hence, impact on its ability to ensure effective evaluation of the socio-economic sustainability factors of the projects. The next section presents the discussion on the validation and refinement of the proposed framework.

9.8 Validation and Refinement of the Initial Framework

The initial conceptual framework was developed from the findings from the literature, semi-structured interviews and the questionnaire survey. To validate the framework for its relevance and applicability in real life practice, a validation questionnaire was designed and sent out to ten (10) sustainable regeneration practitioners in the UK construction industry. In selecting the practitioners for the validation process, the criteria that were used to identify suitable practitioners were based on the following:

- The practitioner should have many years of experience in the delivery of sustainable regeneration projects within the UK construction industry.

- The practitioner should be working on a current sustainable regeneration project in the UK.

- The practitioner should have good knowledge of social and economic sustainability factors, their organisational socio-economic sustainability drivers and barriers, and the government's socio-economic sustainability policy drivers and evaluation processes.

The validation questionnaire together with the framework and guidelines were emailed out to all the 10 selected practitioners. They were asked to rate the framework in terms of its comprehensiveness, user friendliness, logic and flow and its value adding potential. They were also asked to provide any additional comments on the above questions or any general comments that might help to improve the framework further. The validation questionnaire was based on a 5-point Likert scale in line with the one used to collect data for the main study to enable consistency in the data and the findings. See Appendix D for the validation questionnaire sample. The questionnaire survey approach was chosen to enable responses to be collected as quickly as possible from the selected practitioners who were located on various projects across the UK. All the ten (10) practitioners responded to the questionnaire survey sent out to them. The results obtained from the validation questionnaire survey from the practitioners are shown in Table 9.3.

Table 9.3: Validation questionnaire survey results for proposed framework

Validation questions	To a very high/high extent	To some/ limited extent	To no extent at all
The comprehensiveness of framework	8	2	-
The user friendliness of the framework	10	-	-
the logic and flow of the framework	10	-	-
The value adding of the framework	9	1	-

From the above results (Table 9.3), nine (9) of the ten (10) practitioners were of the view that the framework was comprehensive to a very high/high extent, while two (2) of the 10 practitioners believed that the framework was comprehensive to some/limited extent. Also, all the ten (10) practitioners were of the view that the framework was user friendly, logical and was flowing well to a very high/high extent, for them to apply in practice. In terms of its value adding, 9 of the 10 practitioners indicated that the framework 'to a very high/high extent', would add value to their day-to-day evaluation practices and delivery of socio-economic regeneration projects. However, one (1) practitioner was of the view that the framework, if he was to implement it, would to some/limited extent add value to his evaluation practices. Therefore, based on these validation results, it can be said that the framework is comprehensive, user-friendly, logical, flows well, and will also add value to practitioners' evaluation practices towards the delivery of socio-economic sustainability benefits of sustainable regeneration projects in the UK.

However, going through the additional comments, some practitioners provided some suggestions on improving the evaluation process of the framework. They were of the opinion that the inclusion of local communities' stakeholders to help identify what would best suit and meet their needs was very important, and therefore should form part of the evaluation process. They believed that doing so was an important means to ensure that the local communities' stakeholders' views were adequately captured and addressed through the evaluation process, as most of their regeneration projects were located in the local communities. Feedback mechanisms were also suggested, to enable the findings to be fed back to stakeholders, when necessary, for re-evaluation. Accordingly, in view of these suggestions, the initial proposed framework was then refined to reflect these valuable and important suggestions from practitioners, leading to the development of the final framework (Figure 9.3).

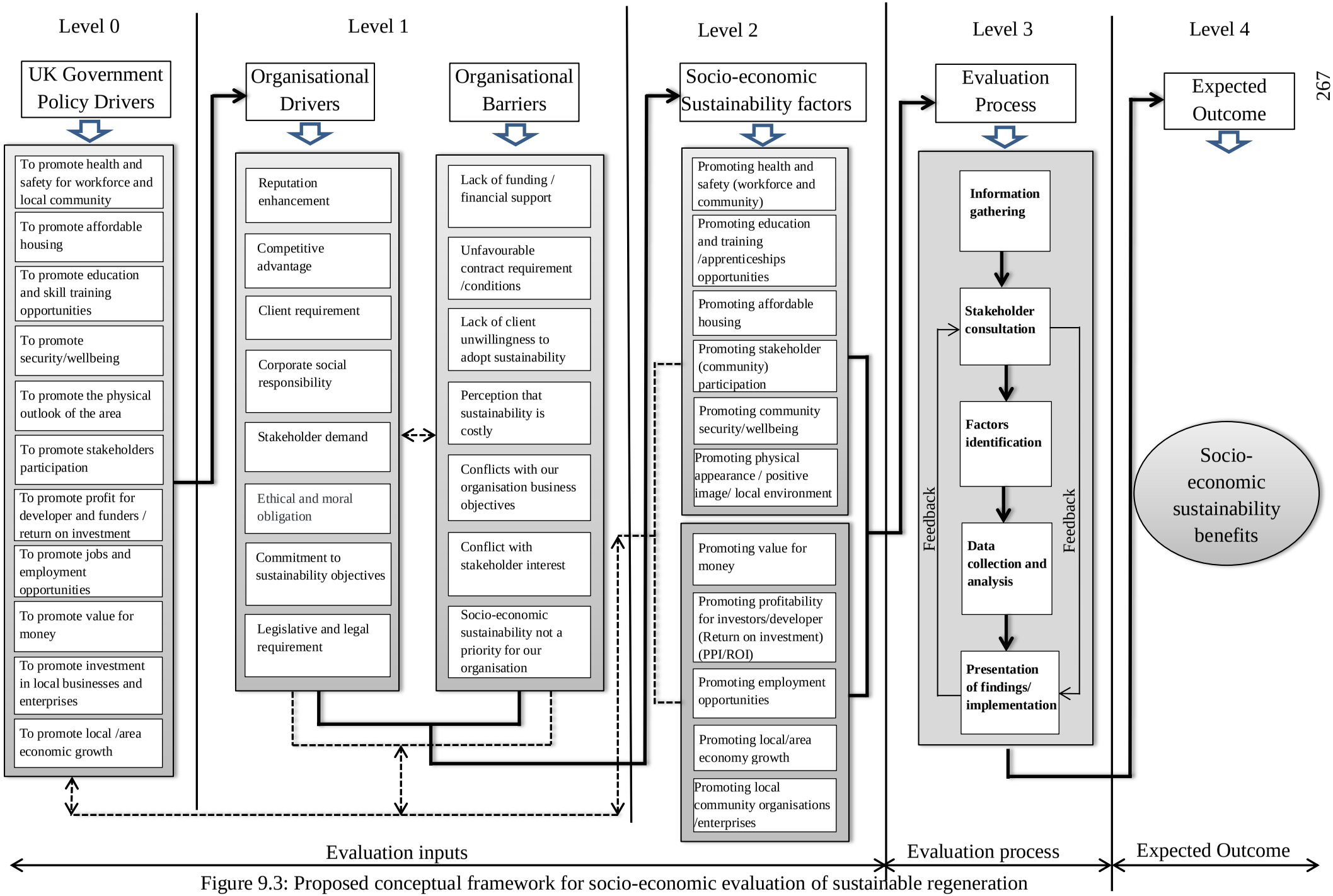

Figure 9.3: Proposed conceptual framework for socio-economic evaluation of sustainable regeneration

9.9 Summary

The Chapter presented the discussion on the proposed framework in fulfilment of the aim and objectives of the present research. It started by presenting the data analysis and discussion on the evaluation process. The data for the analysis was obtained from 21 practitioners through semi-structured interviews and 193 practitioners through a questionnaire survey. Evidence from the results obtained suggested that a significant percentage of current regeneration practitioners' evaluation practices in the UK were not based on any structured and systematic evaluation process. The Chapter further presented the discussion on the key components of the proposed framework and the description of the framework, as well as the evaluation process. Its benefits, application, implications and limitations have also been highlighted.

Additionally, the validation results obtained from ten (10) practitioners (selected based on well-defined criteria) through a questionnaire survey, was presented and discussed. On the whole, practitioners agreed that the proposed framework was comprehensive, user friendly, logical, flowing well and has value adding potential if they were to apply it in real life practice to evaluate their sustainable regeneration projects. However, there were also some key suggestions from practitioners to include community stakeholders' consultation in the evaluation process, to help them identify what best suits and meets their requirements. They also suggested a feedback mechanism within the evaluation process to enable the findings to be fed back to stakeholders, when necessary, for re-evaluation. Based on their suggestions, the proposed initial framework (Figure 9.1) was therefore refined as shown in Figure 9.3. The next Chapter draws conclusions and recommendations of the research.

CHAPTER 10 CONCLUSIONS AND RECOMMENDATIONS

10.1 Introduction

The aim of this Chapter is to provide the summary of the findings, contribution to knowledge, conclusions and recommendations of the study. It commences with the review of the research process and the summary of the objectives and conclusions of the Chapters. It goes on to provide recommendations for possible improvements of future works in terms of practice, policy and study.

10.2 A Review of the Research Process

The study commenced with a review of the literature which suggested that the delivery of sustainable regeneration projects in the UK is still deficient in terms of evaluating the social and economic sustainability benefits of the projects, both in content and processes, and that practitioners lack the understanding, knowledge and guidelines to deliver them. The aim of the study was to develop a framework that can be used to evaluate the social and economic sustainability benefits of sustainable regeneration projects in the UK.

The study achieved the above aim through the development of an evaluation framework which identified the evaluation inputs and evaluation process to be undertaken to enable practitioners to evaluate and deliver the social and economic sustainability benefits of their sustainable regeneration projects.

In order to do this, the following objectives were set out:

- To examine the literature on sustainable regeneration projects and sustainable development and public policy frameworks on sustainable development and regeneration in the UK.

- To examine the extent to which practitioners have been involved in the delivery of sustainable regeneration projects in the UK.

- To explore the organisational socio-economic sustainability factors that drive practitioners to adopt and implement socio-economic sustainability factors on their sustainable regeneration projects in the UK.

- To explore the extent to which consideration is given to the promotion of social and economic sustainability factors on sustainable regeneration projects in the UK.

- To explore the organisational socio-economic sustainability barriers that impede the adoption and implementation of socio-economic sustainability factors on regeneration projects in the UK.

- To explore the UK government's social and economic regeneration policy drivers that influence practitioners to adopt and implement social and economic sustainability factors on sustainable regeneration projects

- To explore the current evaluation practices and processes adopted to evaluate the social and economic sustainability factors on sustainable regeneration projects in the UK.

- To develop and validate a framework for the evaluation of social and economic sustainability benefits of sustainable regeneration projects in the UK.

The following questions were also formulated for the study:

- What are the main organisational issues that drive regeneration practitioners to adopt and implement social and economic sustainability in their sustainable regeneration projects in the UK? (RQ1)

- What consideration is currently given to promoting the social and economic sustainability factors in sustainable regeneration projects in the UK? (RQ2)

- What are the main organisational barriers that impede practitioners to adopt and implement social and economic sustainability factors in their sustainable regeneration projects in the UK? (RQ3)

- What are the main UK government's social and economic regeneration policies that are influencing practitioners' policies and practices to promote socio-economic sustainability factors in their sustainable regeneration projects? (RQ4)

- How are the social and economic sustainability factors of sustainable regeneration projects being currently evaluated by practitioners in the UK? (RQ5)

To answer the above research questions to achieve the aim and objectives set out for the study, a literature review was undertaken. This was followed up with in-depth semi-structured interviews conducted with 21 sustainable regeneration practitioners, selected from three construction organisations in the North West region of England, UK. A questionnaire survey was subsequently conducted with 193 practitioners, drawn from construction organisations involved in the delivery of sustainable regeneration projects in the UK. The questionnaire survey achieved a response rate of 64.3%. The information from the literature review and the results obtained through the analysis of the semi-structured interviews and questionnaire survey resulted in the development of the initial conceptual framework. The initial framework developed was further validated through a questionnaire survey with 10 practitioners, to develop the final framework for the study.

10.3 Research Contribution to Knowledge

The review of the literature has revealed a gap in the delivery and evaluation of socio-economic sustainability benefits of sustainable regeneration projects in the UK, and that regeneration practitioners still lack the understanding, knowledge, evaluation framework and guidelines to deliver the projects. Therefore, undertaking this research has helped to fill the gaps identified in the literature review and also benefited practitioners and other stakeholders. Specifically, undertaking the research:

- Has generally helped to broaden practitioners and other stakeholders' knowledge and understanding of the delivery and evaluation of social and economic sustainability benefits of sustainable regeneration projects.

- The evaluation framework developed has served as a guide for sustainable regeneration practitioners and policy makers responsible for the evaluation and delivery of socio-economic sustainability benefits of regeneration projects.

- It has also provided the basis and reference document for future research. The achievement of the aim has also contributed to the further refinement of the academic treatment of evaluation and delivery of socio-economic sustainability benefits of

regeneration projects. Additionally, it has enabled formal courses of built environment education to better reflect the emergent area of practice related to evaluation and delivery of socio-economic sustainability benefits of sustainable regeneration projects.

10.4 Summary of Objectives and Conclusions

This section presents the processes and the main findings and conclusions of the respective objectives of the study. Following a thorough review of the literature and exploration of the issues with practitioners through the semi-structured interviews and a questionnaire survey, the present study outlined the processes undertaken to address the objectives together with their summary of conclusions.

Objective One: To examine the literature on sustainable regeneration projects and sustainable development and public policy frameworks on sustainable development and regeneration in the UK

The first objective of the study was to examine the literature on sustainable regeneration projects and sustainable development and public policy frameworks on sustainable development and regeneration concept in the UK. The research process began with the initial literature review in Chapter 1 to establish the issues that were important for the research. A review of literature in Chapter 2 explored key issues relating to sustainable development and regeneration concept as well as policy frameworks on sustainable regeneration projects in the UK. On the basis of the literature review, data was collected through semi-structured interview to obtain in-depth understanding of the issues concerned. The findings of the semi-structured interviews further provided the basis for the formulation of the questionnaire survey questions to obtain the quantitative data for the study. The review of literature also provided useful information for the analysis of the issues for the study and the development of the evaluation framework for the study.

Objective Two: To examine the extent to which practitioners have been involved in the delivery of sustainable regeneration projects in the UK.

This objective was concerned with the examination of the extent to which regeneration practitioners were involved in the delivery of sustainable regeneration projects in the UK. To achieve this objective, relevant literature was reviewed (Chapter 4) which was followed by

the collection of qualitative data through semi-structured interviews and quantitative data through a questionnaire survey (Chapter 4) respectively. The findings of the semi-structured interviews and questionnaire survey established the main issues relating to the practitioners' level of involvement in the three main types of sustainable regeneration projects (housing, public sector, private sector) as well as their level of involvement in the three main stages (early, construction, post-construction) of the project delivery processes. Key findings drawn from this objective indicate that:

- Currently, the contracts requirements and the types of sustainable regeneration projects practitioners' organisations are involved in delivering, play a major role in determining practitioners' levels of involvement in the delivery of sustainable regeneration projects in the UK.

- Practitioners such as clients' representatives, architects and commercial managers are the most involved practitioners in the delivery of sustainable regeneration projects in the UK. Their frequent levels of involvement can be seen as a result of their roles and responsibilities in ensuring that the projects achieve certain specific objectives for their clients.

- It is also observed that the delivery of many regeneration projects are still following the traditional projects' management methods, in which architects and clients' representatives are largely seen as key practitioners and tend to play leading roles during the projects' early developmental stages.

- The least involved practitioners in the delivery of regeneration projects currently in the UK are practitioners who have sustainability assigned to their roles and responsibilities (regeneration managers, sustainability managers, training/CSR managers).

- The nature and types of current building contracts employed to procure and deliver sustainable regeneration projects are also seen as a contributing factor for practitioners' frequency of level of involvement in the delivery of regeneration project in the UK.

- In terms of practitioners' levels of involvement in the delivery of the three main types of sustainable regeneration projects, it is observed that housing-led regeneration project is the most frequently involved regeneration projects, while the least frequently involved regeneration project is the private sector commercial regeneration project.

Objective Three: To explore the organisational socio-economic sustainability factors that drive practitioners to adopt and implement socio-economic sustainability factors on their sustainable regeneration projects in the UK.

The third objective set out by this research was to explore the important organisational social and economic sustainability drivers for sustainable regeneration projects in the UK. The literature review in Chapter 2 and the semi-structured interviews and questionnaire survey findings in Chapter 5 revealed a number of important socio-economic sustainability factors, driving practitioners' in their quest to deliver sustainable regeneration projects in the UK. The organisational drivers were first explored with practitioners through semi-structured interviews, followed by an exploration through a questionnaire survey (Chapter 5). Key findings obtained from this objective reveal that:

- The top three most important organizational socio-economic sustainability drivers currently driving practitioners to adopt and implement social and economic sustainability factors in their regeneration projects are, enhancement of reputation, competitive advantage and meeting client requirements.

- The least important organizational socio-economic sustainability drivers currently driving practitioners to adopt and implement social and economic sustainability factors in their regeneration projects is legislative and legal requirements.

- It is observed that a significant number of practitioners are still not genuinely committed to adopting and implementing the socio-economic sustainability principles in their regeneration projects.

- It can be said that the lack of commitment shown by practitioners could also be due to the conventional way an organisation's performance and success is measured.

Objective Four: To explore the extent to which consideration is given to the promotion of social and economic sustainability factors on sustainable regeneration projects in the UK.

Objective four explored the extent to which consideration was given to the promotion of socio-economic sustainability factors on sustainable regeneration projects in the UK. To achieve this objective, a literature review (Chapter 2) was carried out which was further supported by semi-structured interviews and a questionnaire survey (Chapter 6) with regeneration practitioners within the construction industry in the UK. Specifically, key findings obtained in relation to this objective indicate that:

- Health and safety, education and skill training/apprenticeship opportunities and affordable housing are the three most considered social sustainability factors being promoted by practitioners on their regeneration projects.

- The emergence of the considerate contractor scheme and the establishment of Health and Safety Executives (HSE), coupled with other efforts by the UK government to improve health and safety, is seen to be determining the way and manner practitioners are going about promoting health and safety currently on their regeneration projects.

- The three most considered economic sustainability factors which are being promoted by practitioners currently are value for money, profitability for investors/developer (return on investment) and jobs and employment opportunities.

- Although it is observed that the majority of practitioners who participated in the interview are linking their value for money practices to their monetary objectives, the overall responses which outlined their value for money practices can be seen to be positive and encouraging.

- It is observed that the majority of practitioners are considering profitability as the means for them to recoup their monies invested in the projects.

Objective Five: To explore the organisational socio-economic sustainability barriers that impede the adoption and implementation of socio-economic sustainability factors on regeneration projects in the UK.

Objective five set out to explore the organisational socio-economic sustainability barriers impeding practitioners to adopt and implement socio-economic sustainability factors in their regeneration projects. The review of the literature (Chapter 2) and the results obtained from practitioners through the semi-structured interviews and questionnaire survey (Chapter 7) revealed the organisational barriers impeding practitioners to adopt and implement socio-economic sustainability factors in their regeneration projects in the UK. The review of literature provided the basis for data to be collected through the semi-structure interviews and questionnaire survey from practitioners involved in the delivery of sustainable regeneration projects in the UK. The findings revealed a number of barriers currently impeding practitioners in their quest towards the adoption and implementation of socio-economic sustainability factors in their sustainable regeneration projects in the UK. Notably, the findings from this objective establish that:

- Currently, lack of financial/funding support, unfavourable contract requirements/conditions and lack of client willingness to adopt sustainability, are the three most significant barriers, impeding practitioners to adopt and implement socio-economic sustainability in their regeneration projects in the UK.

- It is also observed that the economic crisis and the dissolution of various regeneration delivery partnership schemes such as the New Deal for Communities (NDC) and the Neighbourhood Renewal Fund (NRF) have worsened access to funding/financial support for regeneration projects.

- The nature and wording of contract requirements are impacting on the number, nature and quality of employment and education and skill training opportunities that are being provided by practitioners on their regeneration projects.

- The perceived cost surrounding sustainability issues and the profit-oriented approach adopted by practitioners are still dictating the way practitioners are adopting and implementing socio-economic sustainability factors in their regeneration projects.

- The lack of knowledge and understanding of the priorities and key sustainability composition of sustainable regeneration projects by practitioners are also playing a major role in dictating how the social and economic sustainability factors are adopted and implement by practitioners.

Objective Six: To explore the UK government's social and economic regeneration policy drivers that influence practitioners to adopt and implement social and economic sustainability factors on the sustainable regeneration projects.

Objective six set out to explore the socio-economic regeneration policy drivers of the UK government that are influencing the socio-economic regeneration policies and practices of practitioners in the UK. The literature review in Chapter 2 and the semi-structured interviews and questionnaire survey findings in Chapter 8 revealed a number of the UK government's socio-economic regeneration policy drivers that were influencing regeneration practitioners to promote the social and economic sustainability factors in their sustainable regeneration policies and practices. It was observed that all the eleven (six social, five economic) policy drivers presented to practitioners were influential to them. From the key findings obtained, it is observed that:

- The three most UK government's influential social regeneration policy drivers currently influencing practitioners' regeneration policies and practices are:

  (a) To promote health and safety of the work force and local community/residents.
  (b) To promote affordable housing and
  (c) To promote education and skill training.

- Regeneration practitioners' delivering sustainable regeneration projects in the UK are becoming aware of the opportunities and implications of promoting health and safety practices on their sustainable regeneration projects and are therefore making sure that this policy driver is being given attention in their policies and practices.

- In terms of the economic sustainability policy drivers, 'to promote profit for developer and funders/ROI', 'to promote jobs and employment opportunities' and 'to promote value for money' are the UK government's most economic regeneration policy drivers that are influencing practitioners' economic regeneration policies and practices.

- Profitability and return on investment is given prominence in practitioners' sustainable regeneration policies and practices in the UK.

Objective Seven: To explore the current evaluation practices and processes adopted, to evaluate the social and economic sustainability factors on sustainable regeneration projects in the UK.

Objective seven explored the current evaluation practices and processes that were being adopted to evaluate the socio-economic sustainability factors of sustainable regeneration projects in the UK. In order to address this objective, practitioners, through semi-structured interviews and the questionnaire survey were presented with an evaluation process identified through the review of the literature (Chapter 2). This evaluation process was made up of four main stages; background information gathering (stage-1), factors identification (stage-2), data collection and analysis (stage-3), and presentation of findings (stage-4). The evaluation process was further explored with practitioners through a semi-structured interviews and questionnaire survey (Chapter 9). The main aim was to establish the extent to which practitioners' evaluation practices were adopting/following the best practice and systematic processes towards the evaluation of their sustainable regeneration projects. The findings clearly reveal that currently, a significant number of the regeneration practitioners' evaluation practices in the UK are not based on any structured and systematic evaluation process.

Objective Eight: develop and validate a framework for the evaluation of social and economic sustainability benefits of sustainable regeneration projects in the UK.

Objective eight of the study set out to develop a conceptual framework to serve as a guide for the evaluation of the socio-economic sustainability benefits of sustainable regeneration projects in the UK. The conceptual framework was developed through the literature review (Chapter 2), semi-structured interviews and questionnaire survey data collected and analysed in Chapters 5, 6, 7, 8 and 9 respectively. The evaluation framework was subsequently carried through a validation process with selected practitioners (Chapter 9). Specifically, the evaluation framework developed and validated incorporates: evaluation inputs (UK government policy drivers, organisational drivers and barriers, socio-economic sustainability factors) and an evaluation process (information gathering, stakeholder consultation, factor identification, data collection and analysis, and presentation of findings). It is meant to guide

practitioners to evaluate the socio-economic sustainability benefits of their sustainable regeneration projects in the UK.

It is established that, on the whole, practitioners agreed that the proposed evaluation framework is comprehensive, user friendly, logical and flows well and also has value adding potential if they were to apply it in real life practice to evaluate the social and economic sustainability factors of their sustainable regeneration projects.

10.5 Recommendations

10.5.1 Recommendations for Practitioners

Having considered the summaries of the findings of the study, some key recommendations can also be suggested to improve future works (practice, policy and study) in relation to sustainable regeneration projects. These suggested recommendations are based on the overall findings of the present study as follows:

- For practitioners to deliver the socio-economic sustainability benefits of their sustainable regeneration projects for themselves and other stakeholders, they should be seen to be taking a long-term and holistic view of the overall benefits of delivering sustainability, and not just looking at the short-term commercial risk usually associated with the initial cost of delivering the projects. Taking such a long term view would enable them to deal with the cost perception and uncertainty decisively.

- Practitioners should endeavour to acquire adequate knowledge to enhance their understanding and skills in the delivery of socio-economic regeneration projects through regular attendance at sustainability seminars, workshops and other sustainability training programmes.

- Practitioners should gain a good understanding of what the UK government's policy initiative on profitability is seeking to achieve, as this would enable them to focus their policies and practices on economic sustainability factors that deliver the core objective of this policy initiative.

- It is important that there is an adequate and genuine level of commitment from practitioners to promote the social and economic sustainability principles in their organisations' sustainable regeneration policies and practices without being compelled to do so.

- Practitioners should endeavour to adopt a systematic and well-structured evaluation processes to evaluate the socio-economic sustainability factors of their sustainable regeneration projects.

10.5.2 Recommendations for Policy Makers

- Policy makers and regulatory bodies should put in place sustainability training programmes to enable practitioners to acquire and enhance their sustainability knowledge and skills that will equip them to adequately deal with the socio-economic sustainability issues on their sustainable regeneration projects. Clients (both public and private sector) should also be encouraged to participate in such training programmes to enhance their knowledge and awareness of the main composition of sustainable regeneration projects. This will equip them adequately which could help change their mind-set and attitudes towards the adoption and implementation of the socio-economic sustainability factors on their regeneration projects.

- To ensure that sustainable regeneration projects deliver their social and economic sustainability benefits, it is crucially important that there is adequate involvement of all the key stakeholders in the delivery of the projects. A close collaboration between policy makers, the clients, practitioners and other stakeholders should be encouraged. This also calls for the need to review the building contracts which are currently being employed, to procure and engage the key stakeholders and practitioners in the delivery of the projects.

- Legislation should be introduced to drive practitioners to adequately adopt and implement the social and economic sustainability factors in their regeneration projects. Enforcing compliance to such legislation will enable and ensure practitioners to promote the social and economic sustainability factors in their regeneration policies and practices.

- Adequate funding/financial support should be made available to enable practitioners to promote the socio-economic sustainability aspects of their regeneration projects. The UK government and other regeneration organisations should explore other funding methods/sources beyond the conventional funding sources, to help provide support for practitioners to ensure the successful delivery of the socio-economic sustainability benefits of sustainable regeneration projects.

- Incentives and reward schemes should be introduced to encourage practitioners to give adequate priority to the adoption and implementation of the socio-economic sustainability factors in their generation projects.

- Trainee transfer schemes should be introduced, particularly on public funded regeneration projects, for trainees who are unable to complete their training on a particular project because of the project's limited duration to be transferred to another project (which may not necessarily be with the same practitioner they began their training with) to complete their training. This should also be encouraged on the private sector regeneration projects as well. Policy makers, together with other sustainable regeneration regulatory agencies, should produce guidelines to guide practitioners.

- It is important that policy makers and other regeneration regulatory bodies encourage or even make it a mandatory for practitioners to adopt a systematic and well-structured evaluation processes to evaluate their sustainable regeneration projects.

10.5.3 Recommendations for Future Study

- There is the scope for more studies to be carried out to explore in more depth, practitioners' level of involvement in the delivery of sustainable regeneration projects, particularly at three main stages of the projects' delivery as well as the types of sustainable regeneration projects.

- The present study focused on the delivery of the socio-economic sustainability benefits of sustainable regeneration projects in the UK. The research methodology adopted for the present study could be employed to study how socio-economic

sustainability benefits can be delivered in different contexts and countries. Future studies could also explore how the framework can be adapted or adopted for application in different contexts and countries.

- Although the framework developed was validated by some selected industry practitioners, it is recommended that future studies look at how it could be applied in real life practice.

- The unit of analysis of the study focused on practitioners who are involved in the delivery of sustainable regeneration projects in the UK. Therefore further studies could focus on the projects as a unit of study. Future studies could also adopt a case study research approach involving practitioners selected from construction organisations from other regions in the UK.

REFERENCES

Abidin, N.Z; Yusof, N.A; and Othman, A.A.E. (2013) Enablers and challenges of a sustainable housing industry in Malaysia, *Construction Innovation*, Vol. 13 No. 1.

Adair, A; Berry, J; McGreal, S; Hutchison, N; Watkins, C; Gibb, K. (2003): Urban regeneration and property investment performance, *Journal of Property Research*, 20:4, 371-386.

Adamowicz, W. (2003) Economic indicators of sustainable forest management: theory versus practice, *Journal of Forest Economics*, 9, 27–40.

Adamson, D. (2010) Community empowerment: Identifying the barriers to "purposeful" citizen participation, International Journal of Sociology and Social Policy, Vol. 30 (3/4).

Adcroft, A and Willis, R. (2008) 'A snapshot of strategy research 2002-2006', *Journal of Management History*, Vol. 14 Iss: 4 pp. 313 – 333.

Akadiri, P.O; Chinyio, E.A and Olomolaiye, P.O. (2012) Design of A Sustainable Building: A Conceptual Framework for Implementing Sustainability in the Building Sector, *Buildings, 2*, 126-152.

Ali, A.S; Rahmat, I; Hassan, H; (2011) Involvement of key design participants in refurbishment design process, *Facilities*, Vol. 26 No. 9/10, 2008, pp. 389-400.

Amaratunga, D; Baldry, D; Sarshar, M; Newton, R. (2002), 'Quantitative and qualitative research in the built environment: application of "mixed" research approach', *Work Study*, Vol. 51 Iss: 1 pp. 17 – 31.

Ang, S.L and Wilkinson, S.J. (2008) Is the social agenda driving sustainable property development in Melbourne, Australia? *Property Management*, Vol. 26 No. 5, pp. 331-343.

Anvuur, A.M; Kumaraswamy, M.M and Mahesh, G. (2011) Building "relationally integrated value networks" (RIVANS), Engineering, *Construction and Architectural Management*, Vol. 18 No. 1, 2011, pp. 102-120.

Ardalan, K. (2009) 'Globalization and culture: four paradigmatic views', *International Journal of Social Economics*, Vol. 36 Iss: 5 pp. 513 – 534.

Atkinson, G. (2008) Sustainability, the capital approach and the built environment, *Building Research & Information*, 36(3), 241–247.

Atkintoye, A. and Main, J. (2007), 'Collaborative relationships in construction: the UK contractors' perception', *Engineering, Construction and Achitectura Management*, Vol. 14, No. 6, pp. 597-617.

Audit Commission (2007) *Service Inspection Report, Regeneration, West Lindsey District Council.UK.*

Babbie, E. (2004) *The Practice of Social Research*, 10th ed, Wadsworth Thomson.

Bailey, N. (2010) Understanding Community Empowerment in Urban Regeneration and Planning in England: Putting Policy and Practice in Context, *Planning Practice and Research*, 25:3, 317-332.

Baker, T.L. (1999) *Doing Social Research*, 3rd ed, McGraw-Hill, New York, USA.

Ball, M. (2004) Co-operation with the community in property led urban regeneration, *Journal of Property Research*, 21(2) 119–142.

Barrett, P and Sutrisna, M. (2009) Methodological strategies to gain insights into informality and emergence in construction project case studies, *Construction Management and Economics*, 27: 10, 935-948.

Barrie, D. (2009) Regeneration as social innovation, not a war game, *Journal of Urban Regeneration and Renewal*, Vol. 3, 1, 77–91.

Bartle, I and Vass, P. (2007) Independent economic regulation: A reassessment of its role in sustainable development, *Utilities Policy*, 15, 261-269.

Basit, T. (2003) Manual or electronic? The role of coding in qualitative data analysis, *Educational Research*, 45:2, 143-154.

Bazeley , P. (2006) The Contribution of Computer Software to Integrating Qualitative and Quantitative Data and Analyses, *Research In The Schools*, Vol. 13, No. 1, 64-74.

Bennett, J. and Crudgington, A. (2003) Sustainable development: recent thinking and practice in the UK, *Engineering Sustainability*, 156 Issue ESI, pg. 27-32.

Berg, B.L. (2007) *Qualitative Research Methods for the Social Sciences*, 6th ed, Pearson Education, Inc, USA.

Black, T. (1999) *Doing Quantitative Research in the Social Sciences: An integrated Approach to Research Design, Measurement and Statistics*, SAGE Publications Ltd, London.

Boyko, C.T. Cooper, R. Caroline L. Davey, C.L and Wootton, A.B. (2006) Addressing sustainability early in the urban design process, Management of Environmental Quality: *An International Journal,* Vol. 17, No. 6, pp. 689-706.

Brandon, P.S. and Lombardi, P. (2011) *Evaluating sustainable development: in the Built Environment*, 2nd ed, Wiley and Sons Ltd Publication, UK.

Brennan, L; Voros, J; Brady, E. (2011) 'Paradigms at play and implications for validity in social marketing research', *Journal of Social Marketing,* Vol. 1 Iss: 2 pp. 100 – 119.

Bryman, A. (2008) *Social Research Methods,* 3rd ed, Oxford University Press, Oxford, UK.

Bryman, A. (2006) Paradigm Peace and the Implications for Quality, *International Journal of Social Research Methodology*, 9:2, 111-126.

Bryman, A. (2001) *Social Research Methods,* Oxford University Press Inc, New York.

Burke, M.E. (2007) 'Making choices: research paradigms and information management: Practical applications of philosophy in IM research', *Library Review,* Vol. 56 Iss: 6 pp. 476 – 484.

Cachia, M and Millward, L. (2011) The telephone medium and semi-structured interviews: a complementary fit, *Qualitative Research in Organizations and Management: An International Journal,* Vol. 6 Iss: 3 pp. 265 – 277.

Carcary, M. (2009) "The Research Audit Trial – Enhancing Trustworthiness in Qualitative Inquiry," *The Electronic Journal of Business Research Methods,* Vol 7 Issue 1, pp.11 – 24.

Carpenter, J. (2011) 'Money's too tight to mention'? Urban regeneration in a recession and beyond: The case of Oxford, *Journal of Urban Regeneration and Renewal*, Vol. 4, 3, 228–239.

Carter, K and Fortune, C. (2007) Sustainable development policy perceptions and practice in the UK social housing sector, *Construction Management and Economics*, 25, 399–408.

Carter, C.R and Rogers, D.S. (2008) A framework of sustainable supply chain management: moving toward new theory, *International Journal of Physical Distribution & Logistics Management*, Vol. 38 No. 5, pp. 360-387.

Carter, S.M and Little, M. (2007) Justifying Knowledge, Justifying Method, Taking Action: Epistemologies, Methodologies, and Methods in Qualitative Research, *Qualitative Health Research*, Vol. 17 Number 10, 1316-1328.

Castro, F.G; Kellison, J.G; Boyd, S.J and Kopak, A. (2010) A Methodology for Conducting Integrative Mixed Methods Research and Data Analyses, *Journal of Mixed Methods Research*, 4(4) 342–360.

Chen, H.T. (2006) A Theory-Driven Evaluation Perspective on Mixed Methods Research, *Research in the Schools*, Vol. 13, No. 1, 75-83.

Cheng, B; Ioannou, I; Serafeim, G. (2014) Corporate Social Responsibility and Access to Finance, *Strategic Management Journal*, 35: 1–23.

Civil Engineering Contractor Association (CECA) (2007) *Sustainable Development Strategy and Action Plan for Civil Engineering.*

Clapham, D. (2014) Regeneration and poverty in Wales: Evidence and policy review: *Centre for Regional Economic and Social Research*

Coaffee, J. (2004) Re-scaling regeneration, *The International Journal of Public Sector Management*, Vol.17, No (5) pp. 443-461.

Colantonio, A (2008) Measuring Social Sustainability: Best Practice from Urban Renewal in the EU, 2008/02: *EIBURS Working Paper Series.*

Colantonio, A (2007) Social Sustainability: An Exploratory Analysis of its Definition, Assessment Methods, Metrics and Tools; 2007/01: *EIBURS Working Paper Series.*

Combs, J.P and Onwuegbuzie, A.J. (2010) Describing and Illustrating Data Analysis in Mixed Research, *International Journal of Education*, Vol. 2, No. 2: E13.

Community and Local Government (2011) Regeneration - What are the problems and what can we achieve in addressing them? *A Discussion Paper Commissioned from the Regeneration and Economic Development Analysis Expert Panel for the Regeneration Futures Roundtable.*

Communities and Local Government, (2010) *Valuing the Benefits of Regeneration: Economics paper 7*: Volume I - Final Report.

Communities and Local Government, (2009) Transforming Places; *Changing Lives – A Framework for Regeneration: Summary of Consultation Responses.*

Communities and Local Government, (2008) *Transforming Places; Changing Lives: A framework for regeneration.*

Communities and Local Government, (2007) *Homes for the future: more affordable, more sustainable.*

Corden, A and Sainsbury, R. (2006) *Using verbatim quotations in reporting qualitative social research: researchers' views,* Social Policy Research Unit: University of York.

Cornelius, N; Trueman, M; Wallace, J. (2009) The Regeneration Challenge in the Developed World: Insights Generated from a Capabilities Approach Applied to the Understanding of Regeneration Efforts in Post-industrial Cities, *Working Paper Series***,** No. 09/03.

County Council of The City and County of Cardiff Report of the Economic Scrutiny Committee (ESC), 2006: *Short Scrutiny Study –Economic Regeneration*.

Creswell, J. (2009) *Research design: Qualitative, quantitative and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: SAGE Publication.

Creswell, J.W and Garrett, A.L. (2008) The 'movement' of mixed methods research and the role of educators, *South African Journal of Education,* Vol. 28:321-333.

Cruickshank, H.J and Fenner, R.A. (2007) The evolving role of engineers: towards sustainable development of the built environment, *Journal of International Development,* 19, 111-121.

De Francesco, A.J and Levy, D. (2008) The impact of sustainability on the investment environment, *Journal of European Real Estate Research,* Vol. 1 No. 1, pp. 72-87.

Delgado-Hernandez, D.J and Aspinwall, E. (2008) A framework for building quality into construction projects – Part I, *Total Quality Management & Business Excellence*, 19:10, 1013-1028.

Demacarty, P. (2009) Financial Returns of Corporate Social Responsibility, and the Moral Freedom and Responsibility of Business Leaders, *Business and Society Review* **114:3** 393–433.

Denscombe, M. (2010) *The Good Research Guide: for small-scale social research projects*, 4, edition, Open University Press, England.

Denzin, N. K. and Lincoln, Y.S. (2008) *The landscape of Qualitative Research,* 3rd ed, SAGE Publication Ltd, London, UK.

Denzin, N.K., & Lincoln, Y.S. (2005). Introduction: The discipline and practice of qualitative research. In N.K. Denzin & Y.S. Lincoln (Eds.), *The sage handbook of qualitative research* (2nd ed.). Thousand Oaks, CA: Sage.

Department for Business, Enterprise and Regulatory Reform (DBERR, 2008) *Strategy for Sustainable Construction,* June 2008.

Department for Business, Innovation and Skills (DBIS, 2013) *Industrial Strategy: government and industry in partnership, Construction Strategy 2025*, HM Government.

Department for Business Innovation and Skills (DBIS), 2008) *Strategy for Sustainable Construction.*

Department for Environment, Food & Rural Affairs (2011) *Encouraging businesses to manage their impact on the environment, Business and enterprise and Environment*.

Department for Environment, Food and Rural Affairs (DEFRA, 2005) *Securing the future: delivering the UK sustainable development strategy,* London.

Department of the Environment, Transport and the Regions (DETR, 2000): *London, Building a Better Quality of Life: A Strategy for more Sustainable Construction*.

Department of the Environment (DoE, 1997) Evaluation of Regeneration Activities Funded under the Single Regeneration Budget Bidding Round: *The Evaluation Framework, Discussion Paper 83*.

Department of Trade and Industry (DTI), 2006) *Review of sustainable construction – A summary.*

Department of Trade and Industry (DTI, 2006) Evaluating the Impact of England's Regional Development Agencies: *Developing a Methodology and Evaluation Framework, DTI Occasional Paper NO. 2.*

Department of Trade and Industry (2006) Evaluating the Impact of England's Regional Development Agencies: Developing a Methodology and Evaluation Framework, *DTI Occasional Paper No. 2.*

Department of Trade and Industry (2004), *Sustainable Construction Brief 2, Department of Trade and Industry*, HMSO, London

Ding, G.K.C. (2005) Developing a multi-criteria approach for the measurement of sustainable performance, *Building Research and Information*, 33(1), 3-16.

Dixon, T. (2006) integrating Sustainability into Brownfield Regeneration: Rhetoric or Reality? – An Analysis of the UK Development Industry, *Journal of Property Research*, 23(3) 237–267.

Drews, M. (2010) Measuring the business and societal benefits of corporate responsibility, *Corporate Governance*, Vol. 10, No. 4, pp. 421-431.

Du Plessis, C. (2005) Action for sustainability: preparing an African plan for sustainable building and construction, *Building Research & Information*, 33(5), 405–415.

East Sussex Economic Development Strategy (ESEDS, 2012), April, 2012.

Economic Scrutiny Committee (ESC, 2006): *Short Scrutiny Study – Economic Regeneration, County Council of the City and County of Cardiff Report* 2006.

Edum-Fotwe, F.T and Price, A.D.F (2009) A social ontology for appraising sustainability of construction projects and developments, *International Journal of Project Management*, 27 313–322.

Egan Committee Report (1988) *Rethinking Construction: The report of the construction task force.*

Ela Palmer Heritage (2008) The Social Impacts of Heritage-led Regeneration.

Eldabi, T; Irani, Z; Paul, R.J; Love, P.E.D. (2002), 'Quantitative and qualitative decision-making methods in simulation modelling', *Management Decision,* Vol. 40 Issue: 1 pp. 64–73.

European Multi-stakeholder Forum on CSR, (2004) *Report of the round table on 'fostering CSR among SMES'.*

Evans, G. (2005) Measure for Measure: Evaluating the Evidence of Culture's Contribution to *Regeneration, Urban Studies*, Vol. 42, Nos 5/6, 959–983.

Evans, J and Jones, P. (2008) Rethinking sustainable urban regeneration: ambiguity, creativity, and the shared territory, *Environment and Planning*, volume 40, pages 1416 – 1434.

Evans, J; Jones, P; Krueger, R. (2009) Organic regeneration and sustainability or can the credit crunch save our cities? *Local Environment*, Vol. 14, No. 7, 683–698.

Feige, A; Wallbaum, H and Krank, S. (2011) Harnessing stakeholder motivation: towards a Swiss sustainable building sector, *Building Research & Information*, 39:5, 504-51.

Fellow, R and Liu, A. (2008) *Research Methods for Construction,* 3rd ed, Blackwell Publication Ltd, UK.

Fellows, R and Liu, A. (2003) *Research Method for Construction*, Blackwell Publication Company, 2nd ed, Oxford, UK.

Fidel, R. (2008) Are we there yet?: Mixed methods research in library and information science, *Library & Information Science Research*, 30, 265–272.

Fisher, C. (2004) *Researching and Writing a Dissertation for Business Students*, Pearson Education Ltd, England, UK.

Gibson, M; Thomson, H; Kearns, A; and Petticrew, M. (2011) Understanding the Psychosocial Impacts of Housing Type: Qualitative Evidence from a Housing and Regeneration Intervention, *Housing Studies*, 26:04, 555-573.

Gilbert, N. (2001) *Research Social Life,* 2nd ed, SAGE Publication Limited, London.

Giles, A. (2008) 'Sustainability, the capital approach and the built environment', *Building Research & Information*, 36: 3, 241 — 247.

Glossop, C. (2008) *Housing and economic development: Moving forward together, Centre for Cities.*

Golden, J.S. (2004) The Built Environment Induced Urban Heat Island Effect in Rapidly Urbanizing Arid Regions – A Sustainable Urban Engineering Complexity, *Environmental Sciences*, Vol. 1, No. 4, pp. 321–349.

Granger, R. (2010) What now for urban regeneration? Proceedings of the Institution of Civil Engineers, *Urban Design and Planning*, 163, Issue DP1, Pages 9–16.

Gray, D.E. (2010) *Doing Research in the Real World*, 2nd, ed, SAGE Publication Ltd, London.

Gray, D.E. (2006) *Doing Research in the Real World*, SAGE Publication Ltd, London, UK.

Greene, J.C. (2008) Is Mixed Methods Social Inquiry a Distinctive Methodology? *Journal of Mixed Methods Research*, Vol. 2, No: 1, 7-22.

Greene, J.C. (2006) Toward a Methodology of Mixed Methods Social Inquiry, *Research in the Schools*, Vol. 13, No.1, 93-98.

Grix, J. (2004) *The foundations of research*. Palgrave, MacMillan, London.

Guba, E.G. & Lincoln, Y.S. (2005) Paradigmatic controversies, contradictions and emerging confluences paradigms. In: Denzin, N.K. & Lincoln, Y.S. (eds). *Handbook of Qualitative Research*. 3rd ed. Thousand Oaks: London, Sage.

Hadjri, K. and Crozier, C. (2009), 'Post-occupancy evaluation: purpose, benefits and barriers', *Facilities*, Vol. 27 Nos 1/2, pp. 21-33.

Häkkinen, T and Belloni, K. (2011) Barriers and drivers for sustainable building, *Building Research and Information*, 39:3, 239-255.

Hanson, W.E; Creswell, J.W; Plano Clark, V.L; Petska, K.S and Creswell, J.D. (2005) Mixed Methods Research Designs in Counseling Psychology, *Journal of Counseling Psychological*, Vol. 52, No. 2, 224–235.

Haran, M; Newell, G; Adair, A; McGreal, S; Berry, J. (2011): The performance of UK regeneration property within a mixed asset portfolio, *Journal of Property Research,* 28:1, 75-95.

Harrison, R.L and Reilly, T.M (2011), 'Mixed methods designs in marketing research', *Qualitative Market Research: An International Journal,* Vol. 14 Iss: 1 pp. 7 – 26.

Hawkins, R.G.P and Shaw, H. (2004) Sustainable development: a monument for eternity, *Engineering Sustainability,* 156 Issue ESI, pg. 3-5.

Hemphill, L; Berry, J; McGreal, S. (2004) An Indicator-based Approach to Measuring Sustainable Urban Regeneration Performance: Part 1, Conceptual Foundations and Methodological Framework, Urban Studies, Vol. 41, No. 4, 725–755.

Henderson, S. (2011) The development of competitive advantage through sustainable event management, *Worldwide Hospitality and Tourism Themes,* Vol. 3 No. 3, pp. 245-257.

HM Treasury, (2011) *The Green Book: Appraisal and Evaluation in Central Government.*

HM Treasury (2008) *The Green Book. Appraisal and Evaluation in Central Government.* Treasury Guidance.

HM Treasury (2007) *Review of sub-national economic development and regeneration*.

Hill, R.C. and Bowen, P. (1997) Sustainable construction: principles and a framework for attainment. *Construction Management and Economics*, **15**(3), 223 - 39.

Hills, J. (2007) Ends and Means: The Future Roles of Social Housing in England, *Centre for Analysis of Social Exclusion.*

Hofstad, H (2012) Compact city development: High ideals and emerging practices, Refereed article No. 49, *European Journal of Spatial Development*.

Hussin, A.A. (2009) Roles of professionals in construction industry, The International Conference on Economics and Administration, Faculty of Administration and Business, University of Bucharest, Romania ICEA - *FAA Bucharest, 14-15th November 2009.*

Idoro, G.I. (2009) Clients' perception of construction project leaders in the Nigerian banking industry, *Journal of Engineering, Design and Technology*, Vol. 7, No. 3, 2009, pp. 264-28.

Jabareen, Y (2009) Building a Conceptual Framework: Philosophy, Definitions, and Procedure *International Journal of Qualitative Methods*, 8(4).

Jack, S and Breeze, J. (2008) Guide to Evaluating regeneration projects and programmes, *The Centre for Local Economic Strategies (CLES).*

Jack, L and Kholeif, A. (2007) "Introducing strong structuration theory for informing qualitative case studies in organization, management and accounting research", *Qualitative Research in Organizations and Management: An International Journal*, Vol. 2 Iss: 3 pp. 208 – 225.

Jaillon, L and Poon, C.S. (2008) Sustainable construction aspects of using prefabrication in dense urban environment: a Hong Kong case study, *Construction Management and Economic*, **26**, 953–966.

Jeswani, H.K; Azapagic, A; Schepelmann, P; Ritthoff, M. (2010) Options for broadening and deepening the LCA approaches, *Journal of Cleaner Production*, 18, 120–127.

Johl, S.K; Bruce, A and Binks, M. (2012) A study on the use of mixed method approach via sequential procedure to investigate corporate governance in corporate entrepreneurship among the 100 U.K financial times stock exchange (FTSE) companies, *African Journal of Business Management*, Vol.6 (21), pp. 6369-6377.

Johnson, R.B and Onwuegbuzie, A.J. (2004) Mixed methods research: A research paradigm whose time has come', *Educational Researchers*, vol. 33, no. 7, pp. 14-26.

Johnson, R.B. Onwuegbuzie, A.J. Turner, L.A. (2007) Toward a Definition of Mixed Methods Research, *Journal of Mixed Methods Research*, Vol 1 No. 2, 112-133.

Jones, P., Hillier, D., Comfort, D. (2003) Urban Regeneration Companies and City Centre: *Management Research News*, Vol. 26 (1).

Kaatz, E; Root, D.S; Bowen, P.A; Hill, R.C. (2006) Advancing key outcomes of sustainability building assessment, *Building Research & Information*, 34(4), 308–320.

Kazmierczak, A.E; Curwell, S.R; Turner, J.C. (2009) Regeneration of large urban area: assessment methods, *Proceedings of the Institute of Civil Engineer*, Issue ME2, 117-124.

Khalfan, M.M.A. (2006) Managing sustainability within construction projects, *Journal of Environmental Assessment Policy and Management*, vol. 8, No. 1 pp. 41-60.

Klingner, J.K and. Boardman, A.G. (2011) Addressing the "Research Gap" in Special Education Through Mixed Methods, *Learning Disability Quarterly*, 34(3) 208– 218.

Kral, M.J; Links, P.S and Bergmans, Y. (2012) Suicide Studies and the Need for Mixed Methods Research, *Journal of Mixed Methods Research,* 6 (3) 236–249.

Kraus, P and Britzelmaier, B. (2012) Corporate sustainability management: evidence from Germany, *Journal of Global Responsibility*, Vol. 3 No. 2, pp. 248-262.

Lam, P.T.I; Chan, E.H.W; Chau, C.K; Poon, C.S. (2011) A sustainable framework of "green" specification for construction in Hong Kong, *Journal of Facilities Management*, Vol. 9, No. 1, pp. 16-33.

Lam, P.T.I; Chan, E.H.W; Chau, C.K; Poon, C.S; and Chun, K.P. (2009) Integrating Green Specifications in Construction and Overcoming Barriers in Their Use, *Journal of Professional Issues in Engineering Education and Practice*, Vol. 135, No. 4.

Lankoski, L. (2008) Corporate Responsibility Activities and Economic Performance: a Theory of Why and How They Are Connected, Business Strategy and the Environment *Bus. Strat. Env*. 17, 536–547.

Lee, N. (2006) Bridging the gap between theory and practice in integrated assessment, *Environmental Impact Assessment Review*, 26 (2006) 57– 78.

Littig, B. and Griebler, E. (2005) 'Social sustainability: a catchword between political pragmatism and social theory', *Int. J Sustainable Development*, Vol. 8, Nos. 1/2, pp.65-79.

Lombardi, D.R; Porter, L; Austin Barber, A; Rogers, C.D.F. (2011) Conceptualising Sustainability in UK Urban Regeneration: a Discursive Formation, *Urban Studies*, 48(2) 273–296.

Lombardi, P. (2009) Evaluation of sustainable urban redevelopment scenario, Proceedings of the Institution of Civil Engineers, *Urban Design and Planning* 162, Issue DP4, Pages 179–186.

Madlener, R; Robledo, C; Muys, B; Hektor, B; Domac, J. (2003) A Sustainability Framework for Enhancing the Long-Term Success of LULUCF Projects, C*EPE Working Paper Nr. 29*.

Majdalani, Z; Ajam, M; Mezher, T. (2006) Sustainability in the construction industry: a Lebanese case study, *Construction Innovation*, 6, 33-46.

Mak, M.Y and Peacock, C.J. (2011) Social Sustainability: A Comparison of Case Studies in UK, US and Australia, *17th Pacific Rim Real Estate Society Conference, Gold Coast, 16-19 Jan 2011*.

Maliene, V; Howe, J; Malys, N. (2008) Sustainable communities: Affordable housing and socio-economic relation, *Local Economy*, Vol. 23, No. 4, 267-276.

Mang, P and Reed, B. (2012): Designing from place: a regenerative framework and methodology, *Building Research & Information*, 40:1, 23-38.

Marais, L and Botes, L. (2007) Income generation, local economic development and community development: paying the price for lacking business skills? *Community Development Journal*. Vol 42 No 3, pp. 379–395.

Martinuzzi, A; Kudlak, R; Faber, C and Wiman, A. (2011) CSR Activities and impacts of the construction sector, Research Institute for Managing Sustainability, *Working Papers* No. 1/2011.

Masadeh, M.A (2012) Linking Philosophy, Methodology, and Methods: Toward Mixed Model Design in the Hospitality Industry, *European Journal of Social Sciences*, Vol. 28, No.1 (2012), pp. 128-137.

Mason, C and John Simmons, J. (2014) Embedding Corporate Social Responsibility in Corporate Governance: A Stakeholder Systems Approach, *J Bus Ethics.* 119:77–86.

Matar, M.M; Georgy, M.E; Ibrahim M.E. (2008) Sustainable construction management: introduction of the operational context space (OCS), *Construction Management and Economics*, 26, 261-275.

Mathur, V.N; Price, A.D.F and Austin, S. (2008) 'Conceptualizing stakeholder engagement in the context of sustainability and its assessment', *Construction Management and Economics*, 26: 6, 601- 609.

May, T. (2011) *Social Research: Issues, Methods and Process*, 4th ed, McGraw-Hill Education, England.

May, A.D; Page, M; Hull, A. (2008) Developing a set of decision-support tools for sustainable urban transport in the UK, *Transport Policy*, 15, 328–340.

McQuaid, R.W; Greig, M; Lindsay, C. (2006) Approaches to Evaluation in Community Regeneration, *A Report to Communities Scotland*.

Mertens, D.M. (2010) Philosophy in mixed methods teaching: The transformative paradigm as illustration, *International Journal of Multiple Research Approaches*, **4**: 9–18.

Mezher, T. (2011) Building future sustainable cities: the need for a new mindset, *Construction Innovation*, Vol. 11 No. 2, 2011 pp. 136-141.

Mingers, J. (2001) Combining IS research methods: Towards a pluralist methodology, *Information Systems Research*, Vol. 12, No.3 pp. 240-259.

Morgan, D.L. (2007) Paradigm lost and pragmatism regained: Methodological implications of combining qualitative and quantitative methods, *Journals of Mixed Methods Research,* 1:48-76.

Murray, P.E and Alison J. Cotgrave, A.J. (2007) Sustainability literacy: the future paradigm for construction education, *Structural Survey*, Vol. 25 No. 1, pp. 7-23.

Myers, M.D and Newton, M. (2007) The qualitative interview in IS research: Examining the craft, *Information and Organisation,* 17, 2-17.

Naoum, S.G. (2013) *Dissertation Research and Writing for Construction Students*, 3RD ed, Routledge, London.

Naoum, S.G. (2007) *Dissertation Research and Writing for Construction Students*, 2nd ed, Butterworth-Heinemann, Oxford, UK.

Nardi, P.M. (2006) Doing Survey Research: A Guide to Quantitative Methods, 2nd ed, Pearson Education Inc, USA.

Newman, I and Hitchcock, J. H. (2011) Underlying Agreements Between Quantitative and Qualitative Research: The Short and Tall of It All, *Human Resource Development Review*, 10(4) 381–398.

Nicol, L.A. (2011): The role of institutional regimes in motivating change for sustainable housing, *Building Research & Information*, 39:5, 459-472.

Nwokoro, I and Onukwube, H. (2011) Sustainable or Green Construction in Lagos, Nigeria: Principles, Attributes and Framework, *Journal of Sustainable Development,* Vol. 4, No. 4.

Office of the Deputy Prime Minister (ODPM 2006) *An exploratory assessment of the economic case for regeneration investment from a national perspective.*

Office of Deputy Prime Minister (2005) *Planning Policy Statement 1: Delivering Sustainable Development, UK.*

Office of Government Commerce (OGC, 2011) Sustainability: *The achieving excellence in construction procurement guide.*

Office of Government Commerce (OGC, pocketbook), (2007) *Achieving Excellence in Construction Procurement Guide.*

Okoro, E. (2012) Ethical And Social Responsibility In Global Marketing: An Evaluation Of Corporate Commitment To Stakeholders, *International Business & Economics Research Journal,* Volume 11, Number 8.

One NorthEast, (2009) City Relationships: *Economic linkages in Northern city regions*, November, 2009.

Onwuegbuzie, A.J and Johnson, R.B. (2006) The Validity Issue in Mixed Research, *Research In The Schools*, 2006, Vol. 13, No. 1, 48-63.

Oppenheim, A.N. (2000) *Questionnaire Design, Interviewing and Attitude Measurement*, Continuum, London.

Oyedele, L.O. (2013) Analysis of architects' demotivating factors in design firms, *International Journal of Project Management,* 31 342–354.

Oxoby, R. (2009) Understanding social inclusion and social capital. International Journal of Social Economics, Vol. 36, No. 12. pp. 1133-1152.

Pallant, J. (2010) SPSS S*urvival Manual: A step by step guide to data analysis using SPSS*, 4th ed, Mc Graw Hill, England.

Panas, A. and Pantouvakis, J.P. (2010) Evaluating Research Methodology in Construction Productivity Studies, *The Built & Human Environment Review,* Volume 3, Special Issue 1.

Pansiri, J. (2005) Pragmatism: A Methodological Approach to Researching Strategic Alliances in Tourism, *Tourism and Hospitality Planning & Development,* Vol. 2, No. 3, 191-206.

Parkin, S (2003) Sustainable development: The concept and the practical challenge. *In Proceedings of ICE Civil Engineering Journal*, 138, 3–8.

Parkinson, M; Ball, M; Blake, N and Key, T. (2009) The Credit Crunch and Regeneration: Impact and Implication, *an independent report to the Department for Communities and Local Government.*

Petty, N.J; Thomson, O. P; Stew, G. (2012) Ready for a paradigm shift? Part 1: Introducing the philosophy of qualitative research, *Manual Therapy*, 17 (2012) 267-274.

Pitt, M; Tucker, M; Riley, M; Longden, J. (2009) Towards sustainable construction: promotion and best practices, *Construction Innovation*, Vol. 9, No. 2, pp. 201-224.

Plano Clark, V.L. (2010) The Adoption and Practice of Mixed Methods: U.S. Trends in Federally Funded Health-Related Research, *Qualitative Inquiry,* 16(6) 428–440.

Pope, C; Royen, P.V; Baker, R. (2002) Qualitative methods in research on healthcare quality, *Quality Safe Health Care,* 11:148–152.

Presley, A and Meade, L. (2010) Benchmarking for sustainability: an application to the sustainable construction industry, *An International Journal,* Vol. 17, No. 3, pp. 435-451.

Pritchard, K and Whiting, R. (2012) "Autopilot? A reflexive review of the piloting process in qualitative e-research", Qualitative Research in Organizations and Management: *An International Journal,* Vol. 7, Iss: 3 pp. 338 – 353.

Qu, S. Q and Dumay, J. (2011) The qualitative research interview, *Qualitative Research in Accounting & Management,* Vol. 8 Iss: 3 pp. 238 – 264.

Raco, M and Henderson, S. (2009): Flagship Regeneration in a Global City: The Re-making of Paddington Basin, *Urban Policy and Research*, 27:3, 301-314.

Reed, B. (2007): Shifting from 'sustainability' to regeneration, *Building Research & Information*, 35:6, 674-680.

Reyes, J.P; San-José, J.T; Cuadrado, J; Sancibrian, R. (2014) Health & Safety criteria for determining the sustainable value of construction projects, *Safety Science*, 62, 221–232.

Rickey, B and Houghton, J. (2009) Solving the riddle of the sands: Regenerating England's seaside towns, *Journal of Urban Regeneration and Renewal,* Vol. 3, 1, 46–55.

Roberts, P. (2000) "*The Evaluation, Definition and Purpose of Urban Regeneration" in Robert*. P. and Sykes, H. (ed) (2000) Urban Regeneration: A Hand Book. London: SAGE.

Rogelberg, S.G and Stanton, J.M. (2007) Introduction: Understanding and Dealing with Organizational Survey Nonresponse, *Organizational Research Methods*, Vol. 10, Number 2, 195-209.

Rogers, N and Slowinski, K. (2004) Towards an evaluation framework for urban regeneration in South Australia: Strategic Planning & Research Department for Families & Communities, *Discussion Paper,* March 2004.

Royal Institute of Chartered Surveyors Europe Annual Review 2013: An update RICS Europe and National Groups.

Rodriguez, S. I; Roman, M. S and Sturhahn S. C (2002) *sustainable assessment and report for the university of Michigan's Ann Arbor Campus,* MI.

Roseland, M. (2000) Sustainable community development: integrating environmental, economic, and social objectives, *Progress in Planning*, 54 (2000) 73–132.

Rowley, J. (2012) Conducting research interviews, *Management Research Review*, Vol. 35 Iss: 3 pp. 260 – 271.

Rowlinson, S and Cheung, Y.K.F. (2008) 'Stakeholder management through empowerment: modelling project success', *Construction Management and Economics*, 26: 6, 611 - 623.

Ruona, W. E. A and Lynham, S. A. (2004): A philosophical framework for thought and practice in human resource development, *Human Resource Development International*, 7:2, 151-164.

Sahely, H.R; Kennedy, C.A; Adams, B.J. (2005) Developing sustainability criteria for urban infrastructure systems, *Journal of Civil Engineering*, 32: 72-85.

Santos, G. J. (2006), 'Card sort technique as a qualitative substitute for quantitative exploratory factor analysis', Corporate Communications: *An International Journal,* Vol. 11 Iss: 3 pp. 288 – 302.

Sarantakos, S. (2013) *Social Research*, 4th ed, Macmillan Publishers Limited, UK.

Sarantakos, S. (1998) *Social Research,* 2nd ed, Macmillan, Press Ltd, London.

Saunders, M., Lewis, P and Thornhill, A. (2009) *Research Methods for Business Students*, 5th ed., England: Prentice Hall.

Scottish Centre for Regeneration, (SCR, 2008) *Perspective paper 4, Housing and community regeneration.*

Seale, C. (2005) *Researching Society and Culture*, 2nd Sage Publications, London.

Sedmak, M and Longhurst, P. (2010) "Methodological choices in enterprise systems research", *Business Process Management Journal*, Vol. 16 Iss: 1 pp. 76 – 92.

Sev, A (2009) How can the construction industry contribute to sustainable Development? A conceptual framework. *Sustainable Development,* 17, 161-173.

Shen, L; Tamb, V.W.Y; Tamc, L; and Ji, Y. (2010) Project feasibility study: the key to successful implementation of sustainable and socially responsible construction management practice, *Journal of Cleaner Production*, 18, 254–259.

Silverman, D. (2002) *Doing Qualitative Research: A Practical Handbook*, SAGE Publications Ltd, London.

Smith, R. (2006) Housing Stock Transfer: Investing in Renewal as a Tool for Sustainable Regeneration, *Housing Studies*, Vol. 21, No. 2, 269–282.

Smith, P.A.C and Sharicz, C. (2011) The shift needed for sustainability, *The Learning Organization,* Vol. 18 No. 1, pp. 73-86.

Smith, J and Jaggar, D. (2007) *'Building Cost Planning for the Design Team'*, Butterworth-Heinemann, Oxford, UK.

Smyth, H. (2008) 'The credibility gap in stakeholder management: ethics and evidence of relationship management', *Construction Management and Economics*, 26: 6, 633 – 643.

Sorrell S. and Holti, K. (2007). Approaching regeneration in partnership: Models for private and public section collaboration, *Journal of Urban Regeneration and Renewal*, Vol. 1, 1, 37-43.

Spangenberg, J.H. (2005) Economic sustainability of the economy: concepts and indicators, *Int. J. Sustainable Development*, Vol. 8, Nos. ½.

Special Economics Research Center Strategies (SERCS) for underperforming places: Policy Paper 6, 2011.

Standing, C and Jackson, P (2007) An approach to sustainability for information systems, *Journal of Systems and Information Technology*, Vol. 9 No. 2, pp. 167-176.

Sultan, B and Kajewski, S. (2006) Requirements for Economic Sustainability in the Yemen Construction Industry. *In Serpell, Alfredo, Eds. Proceedings International Symposium on Construction in Developing Economies*: New Issues and Challenges, Santiago, Chile.

Sustainable Development Commission (2008) *Sustainable Development Action Plans.*

Sustainable Development Commission (SDC), (2003) Mainstreaming sustainable regeneration: A call to action. *A Report by the UK Sustainable Development Commission.*

Takim, R. (2009) The Management of Stakeholders' Needs and Expectations in the Development of Construction Project in Malaysia, *Modern Applied Science;* Vol. 3, No. 5.

Tashakkori, A and Teddlie, C. (2010) Putting the Human Back in 'Human Research Methodology': The Researcher in Mixed Methods Research, *Journal of Mixed Methods Research*, 4(4) 271–277.

Tawiah, P.A and Russell, A.D. (2008) Assessing Infrastructure Project Innovation Potential as a Function of Procurement Mode, *Journal of Management in Engineering*, Vol. 24, No.3, 173–186.

The American Institute of Architects (AIA) (2007) *Integrated Project Delivery: A Guide*. Version 1.

The Commission of the European Communities, Green Paper, (CECGP, 2001) *Promoting a European framework for Corporate Social Responsibility*.

The Department for Business Enterprise and Regulatory Reform (BERR) (2008) Strategy for sustainable construction: *Analysis of Responses to Public Consultation.*
*The Green Paper report of the **C**ommission of the European Communities*, (CECGP) 2001.

The Royal Institute of British Architects (RIBA, 2007) *Outline Plan of Work.*

The World Commission on Environment and Development (WCED) (1987) *Our common future*, Oxford University Press, Oxford.

The World Summit on Sustainable Development (WSSD, 2002) 26 August to 4 September 2002, Johannesburg, South Africa.

Thomson, C and El-Haram, M. (2014:109) Potential and implications of sustainability action plans: Lessons from the Greater Middlehaven Regeneration Project, *Built Environment Project and Asset Management*, Vol. 4 No. 1, pp. 108-122.

Thomson, C.S; El-Haram, M.A; Hardcastle, C. (2009) Managing knowledge of urban sustainability assessment, *Engineering Sustainability*, 162 Issue ES1, 35-43.

Tippett, J; Handley, J.F; Ravetz, J. (2007) Meeting the challenges of sustainable Development - A conceptual appraisal of a new methodology for participatory ecological planning, *Progress in Planning*, 67, 9–98.

Toor, S.R and Ogunlana, S.O. (2009) Construction professionals' perception of critical success factors for large-scale construction projects, *Construction Innovation*, Vol. 9 No. 2, pp. 149-167.

Trigunarsyah, B. (2004) Project owners' role in improving constructability of construction projects: an example analysis for Indonesia, *Construction Management and Economics*, 22:8, 861-876.

Tronvoll, B; Brown, S. W; Gremler, D. D; Edvardsson, B. (2011), 'Paradigms in service research', *Journal of Service Management*, Vol. 22 Iss: 5 pp. 560 – 585.

Turcsanyi, J and Sisaye, S. (2013) Corporate social responsibility and its link to financial performance, World Journal of Science, *Technology and Sustainable Development*, Vol. 10 No. 1, pp. 4-18.

Tyler, P. (2011) Regeneration - What are the problems and what can we achieve in addressing them? *A Discussion Paper Commissioned from the Regeneration and Economic Development Analysis Expert Panel for the Regeneration Futures Roundtable.*

Ugwu, O.O and Haupt, T.C. (2007) Key performance indicators and assessment methods for infrastructure sustainability- a South African construction industry perspective, *Building and Environment*, 42, 665-680.

United Nations Conference on Sustainable Development report, 2nd Preparatory Committee Meeting, 7-8 March 2011.

United Nation (2010) *Sustainable Development Innovation Briefs*, March 2010 Issue 9.

United Nations General Assembly (2010) *Preparatory Committee for the United Nations Conference on Sustainable Development,* First session, 17-19 May 2010.

United Nations-Habitat (2009) *Environment and Development News*. Vol. 9, No.1.

United Nations Department of Economics and Social Affairs: (2001) *Report on indicators of sustainable development: framework and methodologies, Commission on Sustainable Development,* Ninth Session 16 - 27.

United Nation, (1992) *The United Nations Conference on Environment and Development* (UNCED), Rio de Janeiro.

Upstream, (2005) *Investing in sustainability: Progress and performance among the UK's listed house builders – revisited.*

Valck, K., Langerak, F., Verhoef, P.C. and Verhoef, P.W.J. (2007) 'Satisifaction with virtual communities of interest: Effect of members' visit frequency', *British Journal of Management*, Vol. 18, No. 3, pp. 241–56.

Van Bueren, E and de Jong, J. (2007) Establishing sustainability: policy successes and failures, *Building Research & Information*, 35(5), 543–556.

Varsei, M; Soosay, C; Fahimnia, B; Sarkis, J. (2014) Framing sustainability performance of supply chains with multidimensional indicators, *Supply Chain Management: An International Journal*, 19/3, 242–257.

Walker, D.A. (2003) Converting Kendall's Tau For Correlational Or Meta-Analytic Analyses, *Journal of Modern Applied Statistical Methods*, Vol. 2, No. 2, 525-530.

Weber, M. (2008) The business case for corporate social responsibility: A company-level measurement approach for CSR, *European Management Journal*, 26, 247– 261.

West, G.P; Bamford, C.E and Marsden, J.W. (2008) Contrasting Entrepreneurial Economic Development in Emerging Latin American Economies: Applications and Extensions of Resource- Based Theory, *Discussion Paper Series*, 2008-03.

White, P (2009) Building a sustainability strategy into the Business, *Corporate Governance*, Vol. 9, No. 4, pp. 386-394.

White, P; Hodges, A and Greenslade, M. (2013) Guidance on measuring and maximising value for money in social transfer programmes: *Toolkit and explanatory text –second edition.*

Williams, T; Bouchlaghem, D; Loveday, D and Law, C. (2013) Principal contractor involvement in post-occupancy evaluation in the UK construction industry, *Facilities*, Vol. 31 No. 1/2, 2013 pp. 39-55.

Williams, K and Dair, C. (2006) *What Is Stopping Sustainable Building in England? Barriers Experienced by Stakeholders in Delivering Sustainable Developments, Sustainable Development, published online in Wiley Inter Science*. Assessed on 10/02/2014.

Winston, N. (2009): Urban Regeneration for Sustainable Development: The Role of Sustainable Housing? *European Planning Studies*, 17:12, 1781-1796.

Woodside, A. G and Wilson, E. J. (2003) "Case study research methods for theory building", *Journal of Business & Industrial Marketing,* Vol. 18 Iss: 6 pp. 493 – 508.

Xundi, D; Liyin, S; Saixing, Z; Jorge, O.J; Xiaoling, Z. (2010) Relationship between energy consumption and economic development in construction industry, *Journal of Engineering, Design and Technology*, Vol. 8, No. 3, pp. 257-273.

Yang, J; Shen, G.Q; Ho, M; Drew, D.S and Chan, A.P.C. (2009) Exploring critical success factors for stakeholder management in construction projects, *Journal of Civil Engineering and Management*, 15(4): 337–348.

Yau, Y.S and Chan, H.L. (2008) To rehabilitate or redevelop? A study of the decision criteria for urban regeneration projects, *Journal of Place Management and Development*, Vol. 1 No. 3, pp. 272-291.

Yin, R.K. (2009) *Case study research-design and methods*, 4th ed, Thousand Oaks, Sage Publications, Inc.

Yin, R. K. (2003) *Applications of case study research,* 2nd ed, Thousand Oaks, CA: Sage.

Zheng, H.W; Shen, G.Q; Wang, H. (2014) A review of recent studies on sustainable urban renewal, *Habitat International*, 41, 272-279.

Zhuang, L. (1995) "Bridging the gap between technology and business strategy: a pilot study on the innovation process", *Management Decision*, Vol. 33 Iss: 8 pp. 13 – 21.

APPENDIX – A

SEMI-STRUCTURED INTERVIEW GUIDE

A. Please can you tell about your background in terms of your
(a) role and responsibilities (b) year of experience

B. Please can you enlighten me about the extent to which you have been involved in the delivery of the following types of sustainable regeneration projects? (a) housing (b) public sector building/project (National/local government) (c) private sector commercial building/project (including, office, retail, sport/leisure)

C. To what extent have you been involved in the delivery of following projects at the following three stages of the projects? (a) early stage. (b) construction stage. (c) post-construction stage

D. In your view, which of these socio-economic sustainability issues do your organisation consider as important driver(s) towards the adoption and implementation of the social and economic sustainability factors in sustainable regeneration projects? (a) enhancement of reputation as a 'sustainable' organisation (b) competitive advantage (c) client requirement (d) legislation and legal requirement (f) ethical
and moral obligation (g) stakeholders demand (i) commitment to sustainability objectives (j) corporate social responsibility

E. Please can you enlighten me about the degree of consideration you give to the promotion of the following social and economic sustainability factors on regeneration projects?

Social sustainability factors
(a) promoting health and safety of work force and local community/residents. (b) promoting education and training /apprenticeships opportunities. (c) promoting affordable housing
(d) promoting stakeholders participation (including local community). (e) promoting community security/wellbeing. (f) promoting physical appearance / positive image of local environment

Economic sustainability factors
(a) promoting value for money (b) promoting profitability for investors/developer (Return on investment) (c)promoting employment opportunities (d) promoting local/area economy growth (e) promoting local community organizations/enterprises

F. In your view, to what extent do you think the following socio-economic sustainability factors act as barrier(s) in impeding your organisation to adopt and implement the socio-economic sustainability factors on your sustainable regeneration projects?
(a) lack of funding/financial support (b) unfavourable contract requirements/conditions (c)lack of client willingness to adopt sustainability (d) perception that sustainability is costly (e) conflicts with our organisation business objectives (g) conflict with stakeholder interest (h) socio-economic sustainability not a priority for our organisation

G. In your opinion, how influential are these UK government's social and economic regeneration policy on your regeneration practices and policies?

Social issue
(a) promote health and safety for workforce and local community/residents. (b) promote affordable housing (c) promote education and skill training opportunities (d) promote security/wellbeing (e) promote the physical outlook of the area (f) promote stakeholders participation

Economic issues
(a) promote profit for developer and funders/return on investment. (b) promote jobs and employment opportunities (c) promote value for money (d) promote investment in local enterprises and businesses (e) promote local/area economic growth

H. To what extent do your evaluation practices aligned/followed the following evaluation process to evaluate the social and economic sustainability factors of your sustainable regeneration
projects? (a) background information gathering (b) factors/indicators identification (c) data collection and analysis (d) presentation of findings/reporting

Any other comment / contribution you would like to make

APPENDIX - B

QUESTIONNAIRE SURVEY

SECTION -1: General information.

In each of questions 1-2, please tick one box only

Q1. Please state your current job title: [ ] Architect/Designer, [ ] Client Representative, [ ] Contract/Project Manager, [ ] Commercial Manager, [ ] Sustainability Director/Manager, [ ] Regeneration Director/Manager, [ ] Training/CSR manager

Q2. How long have you been involved in sustainable regeneration projects/programme? [ ] Less than 1 year, [ ] 1-5 years, [ ] 6-10 years, [ ] 11-15 years, [ ] 16-20 years, [ ] More than 20 years

SECTION -2

Q3- Please indicate the extent to which you have been involved in the following types of sustainable regeneration projects? 1- Always involved, 2- Very often involved, 3- Sometimes involved, 4- Rarely involved, 5- Never involved. Tick one box only in each row.

	Sustainability/regeneration projects	**Extent of involvement**				
		1	**2**	**3**	**4**	**5**
a	Housing development (public and/or private)					
b	Public sector building/project (National/local government)					
c	Private sector commercial building/project (including, office, retail, sport/leisure)					

Q4 Please kindly indicate the extent to which you have been involved in the following stages of sustainable regeneration projects/programmes development? *Please tick the appropriate box that represents your views.* 1- Always involved, 2- Very often involved, 3- Sometimes involved, 4- Rarely involved, 5- Never involved.

Practitioners	**Early stage**					**Construction**					**Post-construction**				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Architect/Designer															
Client Representative															
Contract/Project Manager															
Commercial Manager															
Sustainability Director/Manager															
Regeneration Director/Manager															
Training/CSR manager)															

Q5- Please kindly rate the importance of the following socio-economic sustainability factors that drive your organisation to adopt and implement social and economic sustainability factors in sustainable regeneration projects. *Please rate by ticking the appropriate box that represents your views*. 1- Very important, 2- Important, 3- Fairly important, 4- Slightly important, 5- Not important at all

	Factors that drive organisation/stakeholders	**Importance**				
		1	**2**	**3**	**4**	**5**
1	Enhancement of reputation as a 'sustainable' organisation					
2	Competitive advantage					
3	Client requirement					
4	Legislation and legal requirement					
5	Ethical and moral obligation					
6	Stakeholders demand					
7	Commitment to sustainability objectives					
8	Corporate social responsibility					

Q6- In your view, what degree of consideration do you give to the promotion of the following social and economic sustainability factors on regeneration projects? *Please tick the appropriate box that represents your views.* 1- Very high degree of consideration, 2- High degree of consideration, 3- Some degree of consideration, 4- Limited degree of consideration, 5- No consideration at all.

Social and economic sustainability factors	**Degree of consideration**				
Social	1	2	3	4	5
Health and safety for work force and local community/residents					
Promoting education and training /apprenticeships opportunities					
Promoting affordable housing					
Promoting stakeholders participation (including local community)					
Promoting community security/wellbeing					
Promoting physical appearance / positive image of local environment					
Economic	1	2	3	4	5
Promoting value for money					
Promoting profitability for investors/developer (Return on investment)					
Promoting employment opportunities					
Promoting local/area economy growth					
Promoting local community enterprises/organizations					

Q7- In your view, please rate the extent to which the following socio-economic sustainability factors act as barriers and impede your organisation in adopting and implementing socio-economic sustainability factors on your sustainable regeneration projects? *Please tick the appropriate box that best represent your views.* 1- To a very high extent, 2- To a high extent, 3- To some extent, 4- To a limited extent, 5- Not to any extent at all.

	Socio-economic sustainability barriers	**1**	**2**	**3**	**4**	**5**
1	Lack of funding/financial support (LFS)					
2	Unfavourable contract requirements /conditions (UCR)					
3	Lack of client willingness to adopt sustainability (LCWAS)					
4	Perception that sustainability is costly (PSC)					
5	Conflicts with our organisation business objectives (COBO)					
6	Conflict with stakeholder interest (CSI)					
7	Socio-economic sustainability not a priority for our organisation (SESNPO)					

Q8- In your view, please indicate the UK government's social and economic regeneration policy drivers that *influence* you to adopt and implement social and economic sustainability factors on your sustainable regeneration projects? *Please tick one box only in each row.* 1- Very influential, 2- Influential, 3- Fairly influential, 4 Slightly influential, 5- Not influential at all.

	UK government socio-economic policy drivers					
	Social issues	**1**	**2**	**3**	**4**	**5**
1	To promote health and safety for work force and local community /residents (S) (PHSFLC)					
2	To promote affordable housing (S) (PAH)					
3	To promote education and skill training opportunities (S) (PESTO)					
4	To promote security/wellbeing (S) (PSWA)					
5	To promote the physical outlook of the area (S) (PPOA)					
6	To promote stakeholders participation (S) (PSP)					
	Economic issues	**1**	**2**	**3**	**4**	**5**
1	To promote profit for developer and funders/return on investment (E) (PPD/ROI)					
2	To promote jobs and employment opportunities (E) (PJEO)					
3	To promote value for money (E) (PVM)					
4	To promote investment in local businesses /enterprises (E) (PIBE)					
5	To promote local/area economic growth (E) (PLAEG)					

Q9- Please rate the extent to which your evaluation practices are aligned/followed the following evaluation process as shown below (stage1-4), to evaluate the social and economic sustainability factors on sustainable regeneration projects? *Please rate by ticking the appropriate box that represents your views.* 1- Very high extent, 2- High extent, 3- To some extent, 4- Limited extent, 5- To no extent at all

Stage 1 ⇨	**Stage 2** ⇨	**Stage 3** ⇨	**Stage 4**
Background information gathering	Factors/indicators identification	Data collection and analysis	Presentation of findings/reporting

1. Very high extent	2. High extent	3. To some extent	4. Limited extent	5. To no extent at all

Thank you for taking the time to complete this questionnaire. If you would like a summary of the research report please provide your preferred contact details:

i) Your name (optional)……
ii) Organization name (optional).....……...
iii) Your email address (optional)...……...
iv) Your telephone (optional)…….

APPENDIX - C

The School of the Built Environment
University of Salford
Manchester.
M5 4WT
Tel: 079 5847 3897
Email: j.k.akotia@edu.salford.ac.uk
10th December 2012

A Framework for Social and Economic Benefit Evaluation of Sustainable Regeneration Projects in the UK.

Dear Respondent,

I am currently conducting a research as part of my PhD study into Sustainable Regeneration projects/programmes at the School of the Built Environment, University of Salford, Manchester. The aim of the research is to develop a framework that can be used to evaluate the social and economic benefits of sustainable regeneration projects/programmes in the UK.

Your company has been selected for this study from among the Top Best performing construction companies (league table) published by Building Magazine/New Civil Engineering Magazine 2012 edition in the UK. The survey is designed to solicit your views about the current understanding and practices of sustainability and regeneration, in particular, the socio-economic aspects of sustainable regeneration projects/programme and policies. The survey is expected to take between 15-20 minutes to complete.

I would like to emphasise that, any information provided for this survey will be kept strictly confidential and will only be used for the purpose of this research.

The survey can be accessed via this link:

If you require any further clarification and/or information, please do not hesitate to contact me as shown above. Should you also wish to know more about the study then please do contact Prof. Charles Egbu (c.o.egbu@salford.ac.uk) who is supervising the research. Thanks in advance for your time and invaluable contribution to this research project.

Yours sincerely

Julius Akotia
Graduate Teaching Assistant/PhD Candidate

APPENDIX - D

VALIDATION QUESTIONS

- How would you rate the **comprehensiveness** of the framework? Please tick box that best represents your views below.

Very comprehensive	*Comprehensive*	*Fairly comprehensive*	*Slightly comprehensive*	*Not comprehensive*

- To what extent would you rate the **user friendliness** of the framework? Please tick box that best represents your views below.

Is user friendly to a very high extent	*Is user friendly to a high extent*	*Is user friendly to some extent*	*Is user friendliness to a low extent*	*To no extent user friendly*

- To what extent would you rate the **logic and flow** of the framework? Please tick box that best represents your views below.

Is logical and flows well to a very high extent	*Is logical and flows well to a high extent*	*Is logical and flows well to some extent*	*Is logical and flows well to a low extent*	*To no extent logical and does not flow well*

- In your opinion, to what extent would this framework **add value** to your day-to-day practice in the delivery of socio-economic regeneration projects? Please tick box that best represents your views below.

Would add value to a very high extent	*Would add value to a high extent*	*Would add value to some extent*	*Would add value to a low extent*	*To no extent add value to*

- Please feel free to offer any additional comments on the above questions, or any general comments you may have on the subject matter that might help to improve the framework further.

APPENDIX E

Tests of Between-Subjects Effects

Dependent Variable: ERSO

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	99.595[a]	19	5.242	11.069	.000	.549
Intercept	312.987	1	312.987	660.901	.000	.793
CA	27.137	4	6.784	14.325	.000	.249
CR	27.662	4	6.915	14.603	.000	.252
CA * CR	18.289	11	1.663	3.511	.000	.182
Error	81.929	173	.474			
Total	763.000	193				
Corrected Total	181.523	192				

a. R Squared = .549 (Adjusted R Squared = .499)

ERSO = enhancement of reputation as a sustainable organisation, CA = Competitive advantage, CR = Client requirement

Tests of Between-Subjects Effects

Dependent Variable: LFS

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	121.881[a]	19	6.415	14.611	.000	.616
Intercept	393.609	1	393.609	896.537	.000	.838
LCWAS	13.898	4	3.475	7.914	.000	.155
UCR	17.606	4	4.401	10.025	.000	.188
LCWAS * UCR	22.732	11	2.067	4.707	.000	.230
Error	75.953	173	.439			
Total	911.000	193				
Corrected Total	197.834	192				

a. R Squared = .616 (Adjusted R Squared = .574)

LFS = Lack of funding/ financial support/grant, LCWAS = Lack of client willingness to adopt sustainability, UCR = Unfavourable contract requirements/conditions